VOL. I OCTOBER 1909 No. 4

THE JOURNAL OF HOME ECONOMICS

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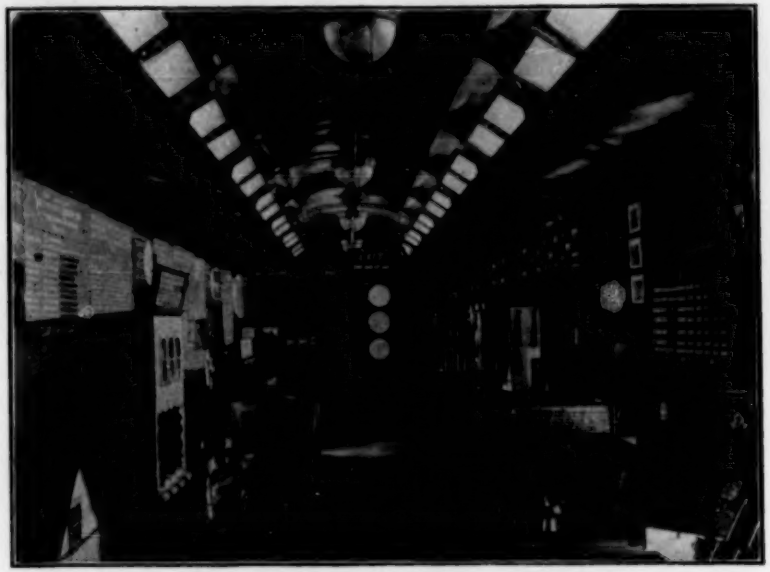


SANITATION CAR. TRAVELING EXHIBIT STATE BOARD OF HEALTH, CALIFORNIA, 1909
(See page 394)

THE
Journal of Home Economics

VOL. I. OCTOBER, 1909 No. 4

REPORT OF THE DENVER MEETING OF AMERICAN HOME ECONOMICS ASSOCIATION.

The Denver meeting of the American Home Economics Association was held July 7-8, 1909. It was in close connection with the sessions of the National Education Association, in rooms arranged for it by the general secretary of that Association who also made the formal announcement, thus giving a standing and stamp of approval. Headquarters were provided by Mrs. Richards at the Hotel Metropole where over forty teachers from ten States registered and met each other socially and were able to compare notes as to their work.

The social features were not so prominent as they would have been had there not been enough and to spare in the N. E. A. program. On Wednesday, for instance, there were scheduled four receptions. Mrs. Richards was one of the chief speakers at the luncheon given by the Mothers' Congress on Tuesday and also at the luncheon given by the School Dames Club on Wednesday.

The first session was opened in Unity Church at 10 o'clock with nearly one hundred in attendance, many ladies of Denver, including Mrs. Sarah Platt Decker, being present. Many men prominent in educational affairs expressed regrets that their own section work prevented their attendance.

No attempt had been made to present set papers, but rather to bring out different phases of the work by means of short statements.

For sins of omission and commission in the following report, made under difficult circumstances, the president and acting secretary beg the tolerance of the members, and hope that any who may be misrepresented will send a correct account of their work.

WEDNESDAY MORNING, JULY 7.

The Home Economics Conference was called to order at Unity Church by Mrs. Ellen H. Richards, President. An address of

welcome was given by Mrs. Stuart Douglas Walling of Denver, followed by words of greeting from Miss Henry, Supervisor of Domestic Science in the Denver Schools, who also announced an exhibit of manual training, domestic science and art in the East Denver High School building.

Mrs. Richards in her opening address spoke as follows:

"Educators have looked askance at Domestic Science work because it was not scientific, and housewives because it was not very domestic. Many lines have developed since the work opened, but the germ of growth was in it from the first. All education is in a plastic condition, especially must this be true of so new a branch as ours. There has been no regular road to follow. Experiment stations for the work are being organized everywhere. The work originally begun by private initiative,—a woman here, a man there who became interested—has now been taken up as a part of public education. The first organization was for the benefit of the poorer classes, the factory girls being notoriously poor cooks, but the young ladies of Boston were also taught in classes. Then, it appeared in the graded schools, from kindergarten up.

"Now comes the crucial point, the high school, the school that prepares for life,—we leave the college out for the present. The point of attack is the high school regular course, the object being to obtain points of credit in high schools, and to perfect methods of carrying out the work. I hope you will study the report on this subject and help the committee. To carry out any such movement requires a means of communication, so the JOURNAL OF HOME ECONOMICS was started last winter, with five issues per year. It is expected that it will eventually be made a monthly. It is hoped that every one will send items of interest in regard to the work.

"In all rural and agricultural education, the girl is acknowledged to be as important as the boy. Congressman Davis, in the provisions of his bill, assumed that the girl needs as much as the boy. In many cities girls are not encouraged to go out and learn a trade, but in the country the boy holds the plow and the girl makes the butter and takes care of the house. Here, surely, is our opportunity. Teachers of all Home Economics subjects have the greatest chance in the world. They can shape the new education to bring all science to the people. Much science is

brought to the machine shop, to the service of agriculture, but not much to the home. It must now be applied to making home life more profitable, more comfortable. I want you to feel proud of yourselves that you are in this work so early.

"In response to requests, we ask discussion upon three topics: (1) the giving of credits for this work; (2) length of lessons; (3) individual vs. group work."

Miss Adams, Supervisor of Domestic Science at Springfield, Ill., reported that girls who take Domestic Science in the high school receive credit in the State University.

Miss Emma A. Chandler from Oklahoma Agricultural College reported a live interest and active cooperation.

Miss Henry, Denver Manual Training High School, described her work, but stated that no credit was obtained.

Miss N. S. Knowles, of the extension staff of the Iowa State College, reported that both long and short courses were taken. There was also extension work through women's clubs, mothers' clubs, farmers' institutes, and teachers' institutes. Teachers' work, especially in physiology, is made more vital by work in Domestic Science.

Miss Morrison of Pueblo, Colo., reported sewing in the fifth and sixth grades, and cooking in the seventh and eighth grades, but no high school work at present. The time given is one period per day.

Miss Berry, DeKalb, Ill., considered one and one-half periods enough, and that more than two hours at one time are wasteful of effort. She uses thirty minutes for the presentation of new work. It is better for children to have the discussion first.

Miss Howell, Kansas City, Kans., thought one hour not enough, and Miss Tingle, Portland, Ore., deemed two-hour periods ideal for children.

Miss Alice Treganza, Bloomington, Ill., reported that work was not yet thoroughly organized in the high school of Bloomington, but that a thorough course in Domestic Science is given in the grades. The work is individual, and counts for one and one-half hours, or one credit in the high school.

Miss Mary B. Vail, Denton, Texas, described her school and said that this is the only school of its kind in Texas. It consists of preparatory work with two years of college work. Miss Secrest of San Luis Obispo, California, reported progressive conditions. Domestic Science in the high school, and Domestic Arts in the graded schools were reported by Miss Ward, of Provo, Utah.

Professor Rosa Bouton, University of Nebraska, expressed her belief in beginning with college work, and working down. The subject appears in the four-years college course, the first and fourth years taking up Domestic Arts, and the second and third years, Domestic Science. The School of Agriculture is now working out a high school course, this being only the second year since girls were admitted to this school. Credits are given for this work. The high school prepares for the university, and there are four or five high schools in the State where Domestic Science has been established.

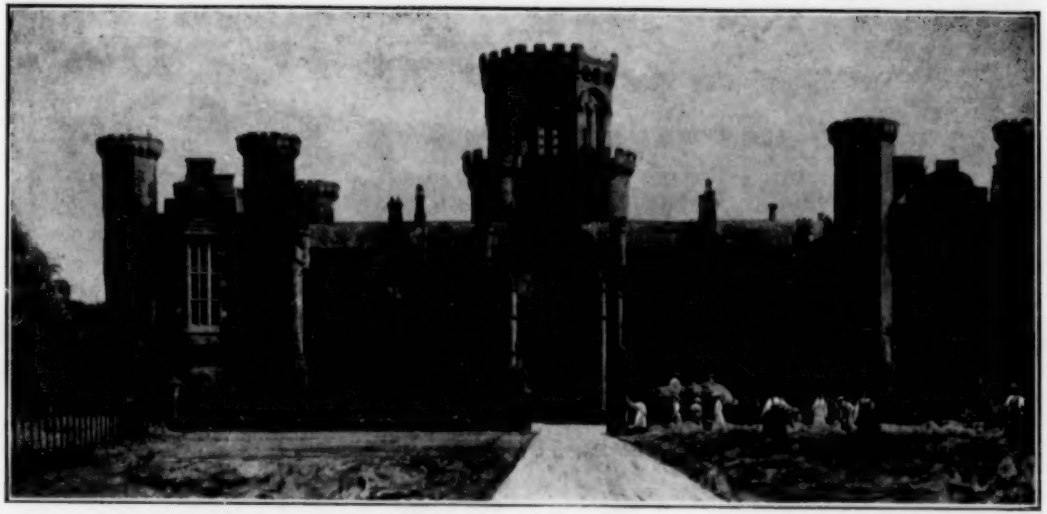
Miss Kerr of Denver stated that at Wolfe Hall Domestic Science has one-half credit, and physics another one-half credit.

The following phases were then considered:

In what year in the high school is Domestic Science generally given? How can it be done when no chemistry or biology is given as a prerequisite? If chemistry follows Domestic Science shall the cooking teacher give elementary principles?

Miss Morgan, Davenport, Iowa, considered that cooking in the first year has a tendency to keep children in the high school. The consensus of opinion seemed to be that the order of work taken and the kind of course given in the high school seem to be seriously complicated with the problem of keeping girls in school by giving them something attractive. With many superintendents and high school masters this is acknowledged. Chemistry as usually taught does not attract hence it is not given, as it should be, in the earlier years as a prerequisite for Domestic Science. Thes ubject matter and method of Domestic Science in the high school must, therefore, be studied together with the new order of studies and the new contents which it is conceded must be worked out in the near future if the high school is to serve the country. The Domestic Science teacher cannot be considered a special teacher, but will become an integral part of the whole system. The school superintendent and the high school master can no longer shirk their responsibility.

It was pointed out that one unit of credit means 400 hours of lecture and laboratory work, or two periods five times a week. Since food work is science, Domestic Science should be inspected as other work is, and should be put in an accredited position, as has already been done by the University of Illinois and the University of Chicago. To teach Domestic Art as a credit



STUDLEY HORTICULTURAL COLLEGE.

subject theory must be illustrated by practice, like chemistry and physics. (See June, 1909, number of the *Educational Review*).

Mrs. Richards here called attention to the fact that reference had been made to the term Domestic Arts, and stated that Domestic Art teachers had been too frequently left out of consideration. Decorative art is said to be more developed than Domestic Art, but we shall come to consider right spending of more and more importance and hence Domestic Art will develop.

Miss Minnie A. Stoner, of Wyoming, said that the State University is the only place of higher education in that State. Home Economics work as taught in it aims to meet three purposes: (1) General culture; (2) training of teachers; (3) a University School of Home Economics. In the normal department, covering the fifth, sixth, seventh and eighth grades the work in Home Economics has yet to be organized on a scientific basis. No high school in the state is now giving work, but many are planning to do so. It is hoped to help them outline their course of study. Cooperative work with farmers' institutes is handicapped by distances and lack of railroad facilities.

In response to a question as to whether the fifth grade is the best place to start Domestic Science, Miss Gleason, Supervisor of Davenport, Iowa, public school work, expressed a preference for the seventh and eighth grades. Below this, hand work includes some sewing, but the real sewing begins in the seventh grade. There is one period in the forenoon, and one and one-quarter in the afternoon. During the coming year it is expected to have some work in the high school, although this is not definitely planned as yet. Domestic Science has been in the schools some fourteen years, and has proved very successful. It begins by work on doll clothes. The eighth grade work is for the girls themselves,—all hand work. Here the length of lessons is one and one-half hours, which for girls in grades is sufficient. Class work is not sufficient as pupils must have individual instruction. It is still a question whether material shall be furnished by the girls or purchased by the teacher and sold to pupils. No credit is allowed, because there is no high school work.

Miss Sabin, President Milwaukee-Downer College, Wisconsin, (one of the first women's colleges to take up this work), thought Domestic Science to be cultural in its scope. The new high schools

in the northern part of the State are invariably making provision for Domestic Science. It is also taught in one county training school. Technical schools are taking it up. There is an endowed chair of Home Economics in Milwaukee-Downer where over 50 young people are preparing to be teachers of this subject. Teachers of science look with great respect on the application of science to this subject, women's clubs are enthusiastic, and its purpose is so rational that it has appealed to many men.

Mrs. Decker declared that it is all right to teach girls science, but wanted to give the woman on the ranch and farm something and "don't make it too scientific. Housekeeping, a good old-fashioned name, means keeping hearts as well as houses. I wish we could keep this term. We must send students from college prepared to adapt themselves to circumstances. I plead for the training of rich girls so that they may carry their knowledge to the poorer girls who cannot afford to get this training."

Miss Rich, president of the Normal school of Santa Barbara, Calif., announced that Governor Gillett is to accept land from that city for a State Normal school in Manual Training and Home Economics. Here the girls will be trained, the wife and mother trained, the children trained,—this will give a new life. In the university, home-training should be sensible and practical although technical. In public school work the outlook is encouraging. The younger habits will be trained in prevention; in the use of new things, and will not need to have old ways explained.

Miss Tingle of Portland, Ore., spoke of the market crusade going on there. The Portland climate is neither hot nor cold, and as it is easy to live, the people are easy-going, and the market people more easy-going. The Domestic Science teacher in the Y. W. C. A. was asked to do something to improve conditions. "Through the State Health Office, all back doors, etc., were opened. We went to the newspapers; we asked the Woman's Club to go on a tour of inspection. All this was brought about in three days. On the fourth day a meeting of householders was called. The Health Department gave official sanction to the movement. Market men were notified that they must clean up. A clean list and a dirty list were to be made, and they must comply with certain regulations in order to be on the clean

list. I worked two months, and the city once aroused, decided that it was a good thing to have inspection made. A woman now has the office, and has power of arrest. Conditions are by no means perfect yet, but a very different attitude of housekeepers and public exists."

Wednesday Evening, July 7.

The evening session was called to order by the president in Unity Church. An address of welcome was made by Miss Mary Rausch of Colorado Agricultural College. Miss Rausch explained how conditions differed in Colorado from those in other states,—the groups of workers being isolated and made a plea for the practical side. She believed in the scientific side as well, but insisted that fundamentally we must help women *now* to make their homes better.

President Harvey of the N. E. A. declared that no subject in the educational field is more important than fitting girls for their work in life. Home Economics training is being introduced into public and into private schools. Probably private schools may show more readily what can be done, but then the public schools can take it up. Many people all over the country still believe that this work should not be given in the public schools, but at home. However, as farmers are now educated in agriculture we must persist and educate women in the fundamental principles of their vocation as well.

Dr. Thomas D. Wood of Teachers College, New York, spoke on Higher Ideals of Family Life to be developed through this work. In this he pointed out the need of considering the welfare of succeeding generations as well as the more immediate necessities of the present. Instruction concerning life and health, responsibility for the home and parenthood and some of the obligations to the future presented, therefore, in his opinion, the greatest possibilities.

Mrs. Guldlin described the work done in Fort Wayne, Indiana, where rich and poor work together, without social distinctions. Domestic Science has gone into schools because there were a few earnest women in the community who have worked for it. Industrial education must have a place in school even if something must be crowded out to make room for this very essential work.

Miss Emma S. Jacobs, Director of Domestic Science, Public Schools, Washington, D. C., spoke of work in rural schools. In attending farmers' institutes it was found that in many homes the children do not even go to school. There are only little one-room houses, not much room, not much money. She said: "We send a teacher once a week to show how to wash dishes; how to clean, cook, and above all, how to select food. The work has been placed in many schools in Maryland, colored as well as white."

"Another good phase of the work bears upon the question of what to do with defective children. We started them in a home, in practical work in housekeeping. We believe more and more in practical work."

An address by Mr. Robert S. Hoover of the West High School, Cleveland, Ohio, President of the Department of Business Education, N. E. A., completed the session.

THURSDAY MORNING, JULY 8.

The session was held in the Central Christian Church. Mrs. Richards, in opening the discussion said: "Yesterday morning Mrs. Decker made her plea for the three meals a day, clean clothes, and clean dishes, and that women be taught how to do these things. We learn that women are neglecting this, going into bachelor apartments. The wise Home Economics teacher is trying to show how to make family life more simple, more desirable."

Settlement work was then discussed, Miss Treganza describing conditions in Bloomington, Ills.; Miss White in Columbus, Ohio; Miss Gleason in Chicago; Miss Stoner gave an account of work in connection with Teacher's Institutes in Wyoming; Miss Williams of Denver told of five years' settlement work in the Y. W. C. A.; and Mrs. Guldin spoke of settlement work in various places. Miss Howell told of mission work in Topeka and Kansas City, among colored people.

Mrs. Richards spoke of some of the later work as carried on with small groups of eight or ten. The work is most efficient with small groups; it takes more time, money and strength, but something substantial is accomplished.

Diet kitchens and classes for young society women, were described by Miss Kerr, of Wolf Hall. Miss Neff spoke most effectively of work in the school for dependent children in

Denver. Miss Stoner told of the work in the Haskell Home. Here a group of ten children is in charge of one teacher, who gives them an idea of home life. Miss Bartlett of San Francisco described the Smith Homes in Oakland. These are cottages giving girls home life. There are ten girls in each house with a house mother. Mrs. Van Wagenen of Denver told of a home for girls in Denver where the special bent of the child is made the most of.

Mrs. Richards closed the discussion, saying, that the whole note of this work is to give power and the sense of power to do something really well. At present so few do work well, and this is the cause of unrest. Opportunities for children somewhat out of the normal are needed to develop this. What is needed is not merely to teach doing things, but to give the feeling of conquering, which develops power.

A few moments remained which were given to the discussion of equipment for teaching Domestic Art. Miss Bouton stated that at the University of Nebraska there were five sewing machines for 40 girls. Miss Howell said that at the Kansas City high school, with 18 in the class, there were six machines and eight tables. For grades where the work was not at one center group work was arranged, three buildings to a group. Mrs. Richards remarked that this showed good work on meager equipment, but was hard on the teacher.

In the discussion on correlation with other subjects Miss Bartlett reported a connection with civics, Miss Himrod that Miss Sturgis of Rochester, N. Y., has correlated art and Domestic Art, and Miss Vail that papers by Domestic Science girls were passed on by English teachers. It is evident that further cooperation would be beneficial.

Summary.

In summarizing the results of the meeting, we notice: first, that Domestic Science is now a recognized feature in the elementary school curriculum; second, that in the new impetus to the introduction of industrial and manual arts, the girls are claiming and securing their share of attention. There is now full opportunity for concerted work, and for all the good ideas that have been worked out anywhere. The Journal will be glad to offer itself as a medium for this welding process.

In the high school there is found a distinct tendency toward allowing ½ to 1 unit credit for "Food Work" with a scientific basis. But the work in many high schools is yet of an industrial character, or of elementary grade, and does not receive credit. No instance of credit for Domestic Art is reported.

It was most gratifying to learn of the excellent work done in many private schools from the settlement up to the technical college. The work of Pres. Cree T. Work of Denton, Texas, is referred to on the next page of this issue. That of Miss Rich, President of the Santa Barbara Normal School, also deserves special notice and it is hoped that it can be described in a subsequent number.

In the present upheaval of the educational system, the college has come in for its share of ciritcism and reconstruction, and it is evident that when the work that has survived is determined a full recognition will be given to Home Economics and euthenics.

On the whole, every teacher felt an increase of vigor and courage with which to attack her problems, of whatever nature they may be.

Consideration of the various methods of organization for mutual helpfulness and the desirability of affiliation with the National Society was general among those present throughout the sessions. Most of those in attendance also joined in the sections of the N. E. A. where the subject of Home Economics received much attention. In the proposed consolidation of N. E. A. departments, Domestic Science is named as a branch of the new department of industrial education, so that it perhaps will not be necessary to have another meeting separate from the association at the time of its session.

THE INFLUENCE OF INDUSTRIAL ARTS AND SCIENCES UPON RURAL AND CITY HOME LIFE.[a]

President Work maintains that courses of art and science introduced into schools in the past and intended primarily for so-called cultural influence have in the course of development and in the order of a new point of view become industrial in their significance and bearing. This change has affected not so much the terminology of the curriculum as the content of the several subjects, more stress being laid on the teaching of particular applications and illustrations as presented in the daily life of the children; practically every formal subject of the present school curriculum may be held to pay tribute to this, the most vital of all studies, the upbuilding and preservation of the home.

The industrial arts and sciences should be taught in the public schools in order to develop in our children social efficiency, which includes vocational efficiency, demands manual skill, a good store of sense—by which we mean information and the ability to comprehend and heed the demands of environment.

While women have a right to enter independent wage earning occupations outside the home we must consider the danger of making too broad the pathway leading from the home and of obscuring the chief practical department of woman's endeavor. The problem is a complex one and the solution of the difficulty would seem to lie in providing such courses of instruction as will give a combined preparation for independent wage earning for home building and home keeping in the broadest sense. "Our cities are filled with miserable women, heartsick men and blighted homes due to the lack of instruction for girls in the grammar grades and high schools in the fundamentals of Home Economics. They must be instructed in the art of making $50 or $60 a month properly support a comfortable home."

One effect of the more general introduction of industrial arts and sciences vitalized with more of the issues of life will be to largely increase the attendance. We shall have more than one per cent of our population enrolled in the high schools and more than five per cent of those entering the elementary schools will

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[a]An abstract of the paper given at the Denver meeting of the N. E. A., Department of Manual Training, by Cree T. Work, President College of Industrial Arts, Denton, Texas.

complete the high school course. When we cease to emphasize the instruction that arouses false hopes and ambitions, we shall develop a type of mind more sensible, practical and human.

The term "culture" is an ever-changing name for the ideal results of the process we call education, and there are many for whom the door of culture is through intelligent industry and thought fully directed handwork. "Inspiration may come through a glimpse of the activities of life in well organized operation, and growth and development often result from the full daylight view of humanity in action."

The industrial arts presented in simple concrete form in correlation with other matters of the curriculum give opportunity for directing the energy of children which under the present system is often wasted or worse. It may be indeed better now for the child to leave school and find in the world about him the training we have failed to provide in school.

President Work drew his illustrations from the Texas College of Industrial Arts where an attempt has been made to base the course of instruction on the practical life interests of women. "The physiology and hygiene is taught by a woman physician who also gives instruction in home nursing and care of the sick; the work in chemistry and physics draws on the home for its problems, drawing finds its application in home decoration, designing in millinery and dressmaking and in the planning of houses and furniture; the cooking is closely related to portions of the dairy work, to botany, to zoology, to chemistry, to physical culture and to physiology and hygiene. The mathematics, manual training, bookkeeping and domestic economy are constantly aiding one another and furnishing rich material for the work in political economy and civics. Except for the change from one laboratory to another and the printed titles on the text books, the student would frequently lose sight of the fact that the work which to her is a continuous problem of life interests is in many schools regarded as so many distinct and unrelated subjects."

"The training of our girls in all these practical lines does not mean that hey are to be slaves to manual labor or that they are primarily to substitute their skill for that of commerical workers. It means that they will have such a practical and comprehensive view of skill and art and science and industry as to make intelli-

gent use of commercial products and to take an effective interest in the supervision and control of the industrial arts and sciences as they apply to the home."

For the training of our boys and girls in these lines we need properly trained teachers, plans for instruction, especially adapted to local environment and suitable equipment for the work.

In preparing teachers the normal school has a great opportunity. Many normal schools offer as yet no courses in Domestic Science and Domestic Arts in some cases because of inadequate equipment, in others because the importance of these branches and the length of time necessary for their study have not been realized.

The indifference or antagonism of colleges and universities is another hindrance to the rapid introduction of industrial arts and sciences into our secondary and high schools, since they assume that the chief function of the lower schools is to prepare for the college.

In the exigencies and legitimate demands of public education we are justified in introducing into our schools such courses as meet the needs of the vastly larger proportions that are never to enter the doors of the college.

STUDLEY HORTICULTURAL COLLEGE.

This college was founded at Reading in 1898 by the Countess of Warwick, as a college for the instruction of women in the lighter branches of agriculture and removed in 1903 to Studley Castle, Warwickshire. The course of study includes a considerable amount of Home Economics work especially as it relates to rural life. The park in which the College is situated is 340 acres in extent, and includes gardens and glass houses. The founder is responsible for the maintenance of the College, and Lady Warwick is assisted in its management by a committee of ladies and gentlemen. Instruction is given in horticulture, dairy work, poultry keeping, bee keeping, fruit canning and preserving, marketing, manual processes, and business methods, and students are prepared for the National Diploma in Dairying, the Certificates and Diplomas of the British Dairy Farmers' Association, the College Certificate and Diploma in Dairying, and the examinations of the Royal Horticultural Society. The Certificate Courses are usually for one year, and the Diploma Courses for two years, with three years in the case of horticulture and bee keeping combined. The session is of forty weeks' duration, and consists of three terms of about thirteen weeks each, beginning in September, January and May.

The fees for tuition, board and residence range from $400 to $600 per annum, according to the course pursued. The number of regular students is between 30 and 40. Nature-study courses of two weeks for men and women are also offered in the summer for which the fees are about $25.

Instruction in horticulture and related subjects is also offered to women at the Horticultural College, at Swanley, Kent. The full course lasts 2 years, and nature-study courses of 2 weeks are held each August, principally for teachers.

The Munster Institute, Cork, offers courses exclusively for women in the practice of dairy work; instruction in the feeding and management of cows, calves, and pigs; poultry keeping; and domestic work, embracing plain cookery, needlework, and laundry work.

THE FUNCTIONS OF THE TRADE-MARK.

ANNA ROBERTA VAN METER.

This is an abridgment of a paper submitted to the Faculty of the Graduate School of Arts and Literature, University of Illinois, as a dissertation in candidacy for the degree of Master of Science, Department of Household Administration, 1908. The complete thesis contains a summary of data as to the origin and development of the trade-mark and as to trade-mark legislation and its interpretation in the past. Those portions of the article which discuss some of the features which characterize the use of the trade-mark in the modern business world, and the purpose which it now serves in connection with modern methods of distributing goods are here presented.

The present trade-mark a result of changed industrial conditions.—The trade-mark as it is now known is but slightly related to the various marks and symbols used in the early ages in connection with property, and even a century ago it was receiving but scant courtesy at the hands of the law. When now in the space of a few decades it has become the subject of almost world-wide legislation and the object of consideration in innumerable decisions a question naturally arises as to the circumstances that have brought all this to pass.

It is unnecessary to do more than to call attention to the industrial and commercial evolution which has taken place in the last century and a half. One invention after another has come into use, multiplying the power of industry a thousand fold. Transportation and communication are now worked out in ways little short of miraculous. All this has resulted in a general contempt for the small and the slow. The tendency apparently inherent in man to seek to enlarge his personality by any means at his disposal can now work itself out by colossal agencies. If, as has been alleged[1], men have never lost interest in the pursuit of game or in their traps and snares, they find in this machine-transformed system of industry opportunity for the exercise of all their accumulated powers of cunning and strategy. The free use of these has resulted in the peculiar forms of over-grown business personality which we know as monopoly.

[1]Thomas, Sex and Society, p. 145.

The trade-mark an agent of monopoly.—Comparing the time previous to the introduction of machinery with the present a modern writer says[1]: "A further feature of that precapitalistic business situation is that business, whether handicraft or trade, was customarily managed with a view to earning a livelihood rather than with a view to profits on investment." Monopolies, however, do not stop even with profits on investments, for the essence of a monopoly is the putting forward of all sorts of capital-extraordinary in a claim for profits. This assumes the modern immaterial form known as "good will" under which head is grouped not only such things as established customary business relations and reputation for upright dealing, but formal monopoly privileges such as franchises, patent rights, copyrights, brands, and trade-marks as well. "The items included," he says, "have this much in common that they are immaterial wealth, intangible assets; which, it may be parenthetically remarked, signifies among other things that these assets are not serviceable to the community but only to their owners,—they are wealth to the individuals concerned but they make no part of the wealth of nations."

Of all the forms in which "good will" emerges to make this sort of demand upon the public the trade-mark ranks highest, probably, in its showing of "intangible assets." The system of protection of trade-mark, says in effect "You may use this mark in connection with your goods, and, no matter whether these are of peculiar merit or not, you will be protected in the benefits of whatever hold you may be able to get upon the public, and this whether the protection means benefit to the consumer or not. It has indeed been pointed out[2], "how willingly the Legislature has lent itself, by the comprehensive provisions of the Merchandise Mark Acts, to the legal protection of the security enjoyed by 'proprietary articles' against competition either in price or quality. A chemist may make Condy's Fluid (the well known disinfecting solution of permanganate of potash) exactly in the same way as Condy, cheaper than Condy, and better than Condy, but he must not sell, under the only name by which customers will ask for it, any but the article supplied—it may be under an iron-clad contract—by Condy himself."

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[1] Veblen, Theory of Business Enterprise.
[2] Webb, Industrial Democracy, p. 685, note.

This yearning of the law toward the one who may be termed the first comer is but an expression through legislation and judicial decision of the general obsession in the direction of the predatory and the masterful in business enterprise. Under such a system of sympathetic protection the entrepreneur proceeds to extend the territory of his influence by means of the addition of various intangible assets to his capital. To accomplish this he has recourse to two agencies, the one being the primitive marking of his wares with a device or symbol, the other the very modern practice of advertising. The one is of little use to him without the other. Together, however, they are the agents of a form of monopoly all the more effective because its hold upon the consumer is a psychic one to which he unconsciously yields himself. "The aim of the wise advertiser," says a psychologist of advertising[1], "should be the making of his name or brand to be the habitual, recent, and vivid associate with his class of goods." Conversely then, the ideal state of mind of the consumer from the point of view of the advertiser should be one where he says unconsciously, "I know nothing in the matter of supplying my wants beyond the fact that the goods I am to buy and pay for are marked with a certain symbol which I cannot fail to recognize." An incident is related which serves to illustrate such a state of mind on the part of the average customer. Certain purchasers had been led by the successful methods of advertising used by a certain firm of hatters to associate the question of hats with this particular firm. When later their attention was directed to a certain style of hat advertised by another firm they proceeded to the former place and there bought hats which they believed to be the ones they had just seen advertised.

With this end attained by a first comer in a certain field what courses are open to another dealer who would attempt to take a hand in supplying the same kind of goods? Manifestly but two. He may by clever imitation of the first dealer's trade-mark lead the hypnotized customer in the direction of his own goods or he may by persistent advertising succeed in breaking into his former region of attention. In regard to the first alternative the law now of course steps in to interfere, while if he adopts the second he gains little in bringing about the deflection in the consumer's attention from the goods of the first comer unless he at

[1] Scott, Theory of Advertising, p. 46.

the same time succeeds in directing it in the same hypnotic manner towards his own. If he fails at this point he has left the consumer in a state of mind bordering on intelligence and discrimination as to the direction of his purchases.

Attitude of the courts.—Review of decisions.—If the second comer infringes upon the trade-mark of the first, the care of the court is directed toward securing the owner of the infringed mark in the costs of the advertising which he has put forth in giving to his mark a value worth infringing. At the same time, a favorable decision here remands the consumer to the servitude of the monopoly.

The reasonable expectation upon the part of the public might well be that the courts would in all cases of doubt as to monopoly right in the first comer so decide as to give the consumer whatever benefit might accrue through freer competition. Attention is called in this connection to a few decisions which by the fact of their recency are all the more interesting as illustrations of what appears to be a growing tendency on the part of the courts to disregard the consumer as a factor which might have weight in influencing their rulings. More than this the three cases selected form a strikingly progressive series.

In the English case of Reddaway v. Hanham[1], the plaintiffs were manufacturers of belting for driving machinery. They used in its manufacture yarn made from a mixture of various kinds of hair and wool of animals. This they imported from Asia. Although it was not known that the mixed material contained camel's hair the belting made from it was stamped with the words "Camel's Hair Belting." The defendant, a former employee of the plaintiff, having gone into business for himself, began the manufacture of a similar belting using similar material but stamping his product "Arabian Belting." Later, he stamped some of his belting "Camel's Hair Belting" in the hope of securing an order for the particular kind of belting which had come to be known to the trade as "Camel's Hair Belting." He had, however, taken the precaution of assuring himself that the hair mixture used by him did in truth contain a considerable percentage of camel's hair. The court enjoined him from using the words "Camel's Hair Belting" in connection with his goods on the ground that the plaintiffs by long association of the name

[1]Reddaway v. Hanham, 1896 Appellate Cases, 199.

with their goods had given to the common descriptive words a secondary meaning as designating goods of their manufacture alone. The fact of intent to defraud upon the part of the defendant was it seems also of importance as affecting the decision.

But what is, after all, the point at issue? Simply that the plaintiffs, having incurred certain bills for advertising their goods, seek a monopoly of the market in order that they may be enabled to collect the amount of these bills from the public. We have but to eliminate the question of the expense of the plaintiff's advertising in order to see that beyond that he has no claim.

But it may be argued and indeed the plaintiff claimed that the defendant's belting was of inferior quality, and that the public was deceived thereby. That may have been true in that instance. But in an American case[1] in which the plaintiffs sought to restrain the defendants from advertising as an aluminum washboard one made of an inferior metal, the judge ruled "It is doubtless morally wrong and improper to impose upon the public by the sale of spurious goods, but this does not give rise to a private right of action unless the property rights of the plaintiff are thereby invaded." In other words that the advertiser is not the custodian of the community's interests.

If instead of the case as it came before the court let it be assumed that not only the plaintiff and the defendant but the consumer as well appeared as parties to the suit. Manifestly a decision issuing from the merits of the case gives to the plaintiff the right to manufacture belting from camel's hair and call the same camel's hair belting. It further extends the same right to the defendant and to any others who may elect to take up a like business. It extends to the consumer the right to the benefits accruing from competition and also the right to assurance, possibly through government inspection, that belting intended for use in connection with dangerous machinery is of a certain grade, no matter by whom manufactured.

A second case[2], may be stated briefly as follows: The complainant manufactured, sold, and advertised a preparation of rennet under the name "Junket Tablets," used in making a food delicacy called Junket. The word Junket, while recognized

[1] American Washboard Co. v. Saginaw Manf. Co., Fed. Reporter, v. 103, p. 285.
[2] Hansen v. Siegel Cooper, Fed. Reporter, v. 106, p. 691.

in the English language as the name of the food, had never been previously used as applied to rennet or any preparation thereof, and, through its use by him in the name of his preparation, had acquired a secondary meaning as identifying his goods. The decision was that he was entitled to an injunction against the use by the defendant, a later dealer, of the name "Junket Capsules" for a similar preparation put up in capsules, but that the latter had the right to designate his preparation as for use in making Junket, provided the word was given no greater prominence than the rest of the designation.

In delivering the opinion of the court it was said: "The dictionaries cited by defendant (Century, Standard) show that the word Junket was recognized in the English language meaning a sweetmeat, or cream cheese, or a delicacy made of curds flavored and served with cream; also a drink made of cream, rennet, spice, and spirits. In view of the fact that rennet is used in the preparation of Junkets, the use of the phrase Junket Tablets, as applied to rennet preparations, may be to a certain extent regarded as descriptive; but evidently the advertisements and demonstrations of complainant have given to the word 'Junket' a secondary meaning associated with the goods of complainant. The case seems entirely within the rules laid down in recent authorities, [among others Reddaway v. Hanham]. There is no contention that the complainant's mode of putting up has been copied or simulated. Indeed, inspection of the packages shows that in that respect there has been perfectly fair trading. Injunction will issue, therefore, only against the marking, advertising, selling and offering for sale of the goods as Anker's Junket Tablets or Anker's Compressed Junket Tablets, or any similar designation.

"The injunction, however, will contain the following clause: This injunction shall not be construed to prevent the defendant from marking, advertising, selling, and offering for sale under the designation Anker's Capsules for making Junket, or under any similar designation, provided there be nothing in the location, type, coloring, etc., of the word Junket to give it any greater prominence than the rest of the designation."

From the writer's standpoint this case is more interesting than that of Reddaway v. Hanham for the reason that here the court goes a step farther in the direction of giving protection to the

first comer. "The phrase Junket Tablets," said the judge, "as applied to rennet preparations may be to a certain extent descriptive; but evidently the *advertisements* and *demonstrations* of complainant have given to the word Junkets a secondary meaning associated with the goods of complainant."

But notice farther. "There is," he says, "no contention that the complainant's mode of putting up has been copied or simulated. . . . in that respect there has been perfectly fair trading."

The case of the plaintiff in this suit is further weakened by the reasonable presumption that, since Junket is a dish known to the housekeepers of several generations, at least, infusions or other preparations of rennet were sometimes spoken of as Junket material. Indeed, a more evolutionary view of the case may be postulated by imagining a child sent to a neighbor's to obtain rennet for making junket. On the way the name rennet slips his memory. Many agreeable experiences, however, have served to impress on his mind the name Junket. He therefore, extricates himself from his dilemma (albeit shamefacedly) by making request for some "junket stuff." Left to himself, the demand of the consumer is likewise the simple one for "junket stuff." The plaintiff had, however, spent money in an attempt to change this natural demand into an artificial one directed towards his own goods, and it must be conceded that it is upon the fact of this situation fundamentally that the decision of the court rests.

The case of Cash v. Cash[1] may be stated in a few words. In 1895 the firm of J. and J. Cash of Coventry, manufacturers of frillings known as Cash's frillings, was converted into a limited company. Joseph Cash, one of the members of the old firm, was made one of the directors of the company but under bond not to resign or to enter into business for himself under five years. In 1898 he obtained permission to resign his directorship. He then formed a company known as Joseph Cash Ltd. and began the manufacture of frillings and other trimmings. As the result of a suit brought against him by the earlier company his business was enjoined, the court holding that it was impossible for him to manufacture frillings, etc., without the same being known as "Cash's frillings."

This case may be regarded as a striking illustration of the acute stage of this peculiar yearning of the law toward the "first

[1] Cash v. Cash, 84 L. T. N. S. 349.

comer." The evidence showed that the defendant was released from his contract with the plaintiff by mutual consent. There was no contention that he was using similar marks or labels in connection with his goods. Further, the reasonable presumption is that he had previously helped in building up whatever good will the business already possessed in association with the name Cash, and that his goods were of equal grade with those of the original company. Granting, now, that the public demanded "Cash's frillings" in preference to any other, upon what grounds did the court base its decision granting monopoly rights to the first company and in what way was the public served thereby?

In Reddaway v. Hanham, the second comer was enjoined from using descriptive words in marking his goods, upon evidence of intent to defraud; in the Junket Tablets case the second comer was enjoined from using a descriptive word in designating his goods, the evidence showing no premeditation of unfair trade; in Cash v. Cash the second comer was enjoined from manufacturing goods under his *own name* upon the presumption that the use of the latter would create direct competition with the goods of the first comer.

Interdependence of the trade-mark and advertising.—Many writers have pointed out the interdependence of the trade-mark and the modern advertising system. In one instance[1] reference is made to the "good-will" of the first comer as depending upon industry, merit, and *vast sums spent in advertising*. Notice may be directed to the interesting cycle indicated by the statement that the modern colossal growth of advertising is absolutely dependent on the power of the law to protect the trade-mark[2]. Another writer[3] says "It is not a simple matter for a new product to gain that confidence and popularity [possessed by one well known]. Enormous outlays for newspaper and other forms of advertising must be made, if a new preparation is to be brought before the American public, and popularity can be kept up only by keeping up the advertising."

Cost of advertising.—"The cost of this advertising often forms a heavy burden upon the price of the product." Further it may be said that "if some prepared breakfast cereal is retailed at fifteen cents a box, the largest part of the price undoubtedly represents

[1]Two Centuries' Growth of American Law, p. 442.
[2]Ibid, p. 437.
[3]Rubinow, J. Pol. Econ., v. 13, pp. 576 et seq.

cost of advertising." This statement cannot be considered extravagant if it is remembered that advertising space in the popular magazines is considered cheap at $540.00 per page[1] which represents, as a matter of course, a sum equal to the retail price of thirty-six hundred packages of cereal at the price mentioned. In the case of those retailing at ten cents per package five thousand four hundred packages would be required to pay for one full page advertisement in a single issue of one periodical. Or, let it be assumed that one such advertisement leads to the sale of ten thousand eight hundred packages at ten cents per package. One half the amount realized will then serve to pay the cost of the advertisement, while the remainder must be made to provide for the raw material used, cost of manufacture, profits on investment, expenses of wrappings and transportation, together with the wholesale and retail profits involved in getting the entire output to the consumer.

Again, when we find three breakfast foods, extensively and persistently advertised, each claiming to be a special kind of corn preparation and all retailing at the same price per package of given weight, the utter wastefulness of the modern system of advertising is perhaps more clearly shown. In this case there may be little or no choice as between the merits of the three preparations, and yet the consumer is importuned from every bill-board to choose one above the others. But no matter which one she may select she pays for it reflecting, if she cares to do so, that the price asked includes not only cost of production plus profits, but also inevitably a definite proportion to the sum which the firm has seen fit to play in the game of advertising. The object of such a struggle as this is of course in the interest of the brand or trade-mark which it is hoped will give to the user a peculiar advantage over competitors, and although the three brands may be at present in practical equilibrium of influence each one in the hope of finally gaining some advantage is willing to hold to the original course so long as the consumer pays the bill without question.

Attention is called to a means of advertising as obvious as the bill-board system, only to suggest the expense of such items as leases, construction and repairs, to say nothing of salaries and travelling expenses of solicitors connected with it.

In contrast with this is the rather subtle method of calling attention by means of demonstrations of their merits. Of special

[1] Harper's Magazine Advertiser, April, 1908, Testimonial L. E. Waterman Co.

interest in connection with the Junket Tablets case is the fact that for many years during which this preparation has been on the market the manufacturers have maintained a demonstrator in the grocery department of a large department store in Chicago. Nor is she alone in this work. A visit to the store shows demonstrations of one kind of goods or another on every hand, inquiry bringing out the information that the number carried on from day to day ranges from twenty to thirty. The salaries paid these women by the manufacturers they represent are about double the wages received by the regular clerks in the store. The competition here is in most cases as keen as that in other forms of advertising, demonstrations of rival brands of lard substitutes, cocoa, and what not, being carried on side by side. In the opinion of one demonstrator the scheme is very much overworked and will soon have to be abandoned in favor of some more effective method. Incidentally, of course, all this gives employment to a number of people, but any discussion of an adjustment of benefits which it may be possible to make between an artificial employment and the artificial demand upon which the employment is based is entirely beyond the scope of the present paper.

Attitude of the consumer.—It now remains to inquire why the consumer makes so little effectual protest against all this encroachment upon his interests. A partial explanation is found in his lack of adjustment to what may be termed a remote source of supply. As has been said, "When most men bought their wares at the maker's door, there was little need for a mark of identification on the goods." Now, however, the consumer is appalled by the impersonality connected with the supplying of his wants. Confused and bewildered by the magnitude and variety of the offering, he is glad to seize upon any sign or symbol which may have come to have a friendly or reassuring association. The trade-mark and the dictatorial advertisement appear to him as guides in the wilderness.

Further the whole subject of consumption is found receiving little attention at the hands of economists themselves. It is small wonder then that the individual consumer submits unthinkingly to many forms of dictation as to the direction and cost of his purchases.

In the home, the headquarters, so to speak, of ultimate consumption, it may be observed that where one housekeeper makes

a definite study of her needs and of the means for supplying them thousands of others look no further in the matter than the question of brand or price. Take as illustration a commodity in such general use as baking powder. The demand is made not for a certain grade or quality except in so far as these may be associated with a certain known brand. In the course of her experience she finds a cream of tartar baking powder satisfactory, but, instead of knowing it as such and as costing to make (including profits all along the line) some twenty-eight cents a pound she knows it only under some special trade name at fifty cents a pound. Contrast this attitude with that maintained by one who may be termed an intelligent purchaser of the same class of goods. The following extract is from a letter received from the president of a well-known firm of bakers. "At one time in the early ages,' he writes, "we did buy an extensively advertised brand, but on investigation found that we were paying for advertisements in addition to the actual value of the baking powder[1]." Again the prevalent predisposition of mind toward admiration and approval of business enterprise leads the consumer to contribute unconcernedly or even boastingly toward his own undoing.

An excellent illustration of this may be found in a book[2] in which the author in discussing the theory of advertising, sets forth clearly the forces, not to say tricks, which must be brought into play by the advertiser if his goods are to obtain a psychic hold upon the public. Schemes for making the small appear large and the short appear long are explained without apology. And although the writer is himself a consumer pure and simple he declares in conclusion that he shall feel the book has accomplished its mission if it shall assist business men to any extent in acquiring this *necessary knowledge*, or if it shall throw light upon the true principles of a most important part of modern business.

Whether the consumer in influenced in his choice by either bewilderment, ignorance, or deliberate misapprehension of his own position, to just that extent has he yielded up his bargaining power.

Summary.—To summarize it has been seen that in the modern system of distribution the trade-mark is intended to give a cur-

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1 While the firm in question cannot be regarded as consumers of baking powder, their position in the matter of its selection is no more advanced than one which could be taken with profit by any consumer in supplying his personal wants.

2Scott, loc. cit. pp. 163 and 233.

rency and acceptability value to the goods with which it is associated greater than that inhering in the goods themselves; that this value consists in the psychic hold which the goods may have attained on the public through the medium of advertising, and also that the cost of this advertising is added inevitably to the price of the goods. Further, in connection with many situations, the advertising is no longer a legitimate instrument for giving information but is rather the wager in a desperate and costly game played in the hope of holding the field. At the same time the public through the medium of the courts or through its own ignorance, carelessness, or mistaken endorsement of the present militant system of business has contributed to increase the insignificance now attaching to its own role as consumer.

The situation, however, is not unique among many that have arisen in connection with aggressive enterprises. Many agencies in themselves of valid service to society have been so selfishly promoted as to become little short of oppressive. New methods of transportation and communication came as a boon bringing much in the way of convenience and satisfaction in social intercourse. But while the public has been absorbed in self-congratulation the machinery of these things has been precipitated upon it bodily. It is possible to travel fast and far, but the street before the door cannot be crossed in comfort or safety. Messages flash through vast space, but in the din of it all the voice of conversation is swallowed up.

There is no plea here for a return to the crude simplicity of other days when goods were "bought at the maker's door." Nevertheless the evidence is offered as showing that individual initiative, however essential it may be to social progress, is in no wise to be trusted to restrain itself at the point where it begins to transcend the interests of those whom it is supposed to serve.

AN ESSAY ON DIGESTION: 1825.

LAFAYETTE B. MENDEL.

The modern theories of the functions of the digestive glands and their secretions form a part of the science of nutrition so significant and so intimately concerned in it that we rarely appreciate the intellectual struggle once caused by the advocacy of these views. The pioneer work of Dr. Beaumont in his studies of digestion has left an indelible impression on the history of physiology, especially in America. In a paper published earlier in this JOURNAL[a] reference was made to some trends of physiological opinion in this country at the opening of the nineteenth century and previous to the classic researches on Alexis St. Martin, "the man with the lid on his stomach." The work of Reaumur and Spallanzani which established the chemical, solvent action of the gastric juice upon the basis of experimental observation had begun to attract attention in the teaching of the oldest medical schools in America. Hunter's observations on the post-mortem "erosions of the stomach" were likewise drawn into consideration.

The status of the physiology of digestion at the period to which reference is here made may best be outlined by a few quotations from a popular book of that time, edited by a well known Philadelphia teacher.[b] The relative part which the stomach plays in the alimentary changes is pointed out very clearly.

"The stomach has ever been considered as the principal organ of digestion, yet its function in that process is but secondary and preparatory: it is not in the stomach, that the principal and most essential phenomenon of digestion takes place, I mean the separation of the nutritive from the excrementitious part of the food."

After an entertaining critique of the older hypotheses broached to explain the mechanism of digestion, viz. concoction, fermentation, putrefaction, and maceration of the food taken into the cavity of the stomach, the author outlines what we may interpret as the newer ideas then current.

"The gastric juice not only pervades and dissolves the food received into the stomach, but it unites and ultimately combines with it, completely alters its nature and changes its composition.

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a J. Home Econ. 1, (1909) p. 255.
b Richerand's Elements of Physiology, with notes by N. Chapman, M.D., Philadelphia, 1813.

The gastric juice acts, in a manner peculiar to itself, on the food exposed to its action, and far from inducing a beginning of putrefaction, suspends on the contrary and corrects putrescency. . . . However powerful the efficacy of the gastric juice to dissolve the alimentary substances, it does not direct against the coats of the stomach its active solvent faculty. These parietes endowed with life, powerfully resist solution. . . . But when the stomach and other organs have lost their vitality, its parietes yield to the solvent power of the juices which it may contain, they become softened, and even in part destroyed, if we may believe Hunter. . . . It is now pretty generally admitted, that digestion in the stomach consists in the solution of the food in the gastric juice. This powerful solvent penetrates, in every direction, the alimentary mass, removes from one another, or divides its molecules, combines with it, alters its inward composition, and imparts to it qualities very different from those which it possessed before the mixture. . . . It is highly probable that its chemical composition varies at different times; that it is acid, alkaline, or saponaceous, according to the nature of the food. Although the gastric juice be the most powerful agent of digestion, its solvent power requires to be aided by several secondary causes. . . . one might therefore say, that the process of digestion is at once chemical, mechanical, and vital; in that case, the authors of the theories just broached, have been wrong in ascribing to one cause, such as heat, fermentation, putrefaction, trituration, maceration, and the action of the gastric juice, a process which is the result of a concurrence of these causes united."

Another contemporaneous picture is drawn by Philip in his Treatise on Indigestion.[a]

"It has been ascertained by the experiments of Spallanzani and others, that the stomach secretes a fluid capable, even out of the body, of converting the food into such a mass as that into which it is changed in the stomach, immediately before it is sent into the duodenum. This fact leaves no room to doubt, that it is by the agency of the above fluid that the food undergoes the change which is effected on it in the stomach; and it appears from the observations of Mr. Hunter, that such is the power of this fluid, that it corrodes the stomach itself when deprived of the vital principle by which it is enabled to resist its action. When to these facts we add, that by means of the muscular power of the stomach, the food,when duly prepared by the action of the gastric fluid, is propelled into the duodenum, we state the sum of our knowledge on this subject."

On the basis of his observations the author then adds this interesting summary quite in harmony with present-day conceptions of the location of the digestive activities in the stomach.

[a]The quotation is from the Philadelphia edition of 1823.

"From all that has been said it appears that the process which the food undergoes in the stomach is that of being formed into a mass, in appearance nearly homogeneous; that this process takes place only on or near the surface of the stomach, and that, in proportion as the food there situated undergoes the necessary change, it is by the muscular power of the stomach moved onwards towards the pylorus. . . till the whole contents of the stomach have undergone this process, the digested contents being regularly discharged into the duodenum."

It must be frankly admitted—and this deserves due emphasis even to-day—that the progress made was an outcome of the introduction of the experimental method. Conclusions were at length based on observation rather than argument and analogy. As an illustration of the sophistries with which the progressive science of physiology was obliged to contend in its earlier days in this country, and of the energy with which the opponents of the newer doctrines met the issues, I wish to review a long-forgotten monograph: A Physiological Essay on Digestion, published in 1825 by Nathan R. Smith, M.D., then professor of Anatomy and Physiology in the University of Vermont. Dr. Smith was the son of an eminent teacher and well-known medical writer of the day—Dr. Nathan Smith of Yale—under whom he studied medicine, receiving the degree of M.D. in 1823. At about the period of publication of the essay on digestion he spent some time in attending lectures at the University of Pennsylvania. Whether the teachings which he may have heard there had an influence on the paper before us is not apparent. The immediate purpose of the essay is to deny the validity of the then current teaching regarding the solvent powers of the gastric juice and the theories of digestion based upon it. Beaumont, it will be remembered, had not yet published his Physiology of Digestion which definitely silenced such views as Smith promulgated in this paper dedicated "to those whose talents and candour elevate them above the local and personal partialities and prejudices, which characterize too many of our profession." Contributing no essential, new observations, the author contented himself largely with an attack on "the present mode of reasoning on these subjects." The point of view, quite foreign to our present day notions, was summarized in these words:

"When we confine our inquiries to any particular science, with the laws of which we are unacquainted, and reason from an effect

to a cause, which in its operations we know to be controlled by those laws, there need be no fallacy. But, if we enter another field of science, the laws of which we have not investigated, and reason from an effect to a cause, we shall almost certainly fall into an error, for we unconsciously attribute the effect to a cause with the operations of which we are familiar. Thus, if we combine two inorganic substances, and after a time, observe that a remarkable change has taken place in their properties, we at once, and with propriety, attribute it to the influence of chemical affinities; for we know that such substances are exclusively under the control of physical properties. But if we convey certain substances into the stomach of an animal, a polypus for instance, and upon removing them after a considerable time, discover that they have become very much changed, having received new chemical and sensible properties, it is altogether unwarrantable to infer that these changes are wholly the effect of chemical influence; for as the stomach of this and every other animal is imbued with certain vital properties, and as we are not yet fully acquainted with their laws or uniform habits of action, we cannot say how much, in this instance, is to be attributed to their influence.

"That similar effects, then, in any particular science are referrible to the same cause, is generally true; but that similar effects in two distinct sciences, the cause being known in one, are referrible to the same cause, is, in principle, false."

The scientist of modern times would find less consolation in fixing the limits of knowledge as did Dr. Smith.

"How much more happily then are we circumstanced," he writes, "than were the earlier physiologists, who for the want of these simple truths, exhausted the efforts of many great minds upon subjects which the author of nature has rendered incomprehensible. For centuries the efforts of the human mind have been lost; occasionally indeed a transcendent genius has intuitively fallen upon an important truth, but without being conscious of the mental process that led to it, and, of course, without being able to establish any uniform principles of reasoning, which should confirm his own discoveries and lead on to others; hence the world has been but little benefitted by those flashes of truth, which found and left it in the darkness."

Experiments on animals must be accepted with the greatest reserve, in Dr. Smith's opinion; arguments drawn from analogy "are often exceedingly useful."

Dr. Smith realized, indeed, that the "chemical theory of digestion" was winning the confidence of the medical world; "so confident are men of science in its imperishable nature that all our systems of physiology and pathology are founded upon it as

their corner stone." He was prepared to meet a formidable opponent. Here are his own words:

"The earliest writers on this subject, were of opinion, that the change effected on the aliment in the stomach was little else than the result of putrefaction. Unsophisticated in the logic of the natural philosophers and chemists, they supposed the food to undergo the same change which warmth and moisture effect upon it out of the body. But when the physical sciences had made some progress, and men of learning were habituated to reason almost exclusively on physical principles, the mechanism of the system was alone talked of, and the stomach wrought mechanically upon its contents. As chemistry began to assume the character of a science, it also, was very prolific in physiological explanations, and digestion was wholly chemical.

"It were ridiculous in us, as it has appeared in many writers, on this subject, to inflict, like Falstaff, a new stab on these dead theories, for the sake of making the victory, in part, our own. As shown in our introduction, they are obviously inconsistent with principles of medical logic, now well established. We enter the field armed with our sling and stone, (common sense and truth) against a far more formidable adversary, in the prime of life, mailed in all the sophistry of the age, and backed by universal approbation."

Let us examine the objections formulated by Dr. Smith.

"It appears," he writes, "that Chesselden, Reaumur, and Spallanzani were led to anticipate the existence of a powerful solvent in the stomach, from comparing the changes which the food undergoes in that organ, with results obtained in their laboratories.

"This was evidently predicting the means by which Nature should accomplish her ends, in one department of science, by observing what she has done in another, in which the properties of matter, and the laws by which they are exerted, are entirely different.

"It is only in the character of humble enquirers, who submit themselves to the guidance of such facts as they may discover, that men have extended the boundaries of knowledge.

"Were it impossible that the changes effected on the aliment in the stomach should be accomplished in any other way than by a mechanical or chemical process, their conclusion would be just, for there could be no fallacy in reasoning from an effect to a cause, the operations of which we are acquainted with. But, knowing the distinction which exists between the physical and physiological sciences, it is not only possible, but even probable, that this change is wrought by a cause, the operations of which we are but little acquainted with. It is incumbent on those, therefore, who maintain the above position, not merely to show

the effect, but to demonstrate unequivocally that the gastric fluid possesses such properties as are capable of producing the effects attributed to it, or to show that they can be accomplished in no other way."

The author very properly calls attention to the uncertainty of the evidence regarding the assumed acid properties of the gastric juice—a feature which it will be remembered was not definitely established until late. He lays emphasis on the reports of Montegre tending to show that outside of the stomach the gastric juice "is as inert as water." At the present time it seems probable that this investigator was dealing with swallowed saliva in his much quoted experiments. With regard to the classic observations of Hunter that erosions of the coats of the stomach may take place after death, Dr. Smith rejects the idea that "this (gastric) fluid acts thus upon the dead stomach, with an energy equal to that of the most powerful acids."

"Who, therefore, will undertake to say, that the above mentioned erosions of the stomach are effected by a fluid, secreted by that organ, and possessing remarkable chemical properties, because it is impossible that they can be accomplished in any other way? We know, very well, the extreme vascularity of the stomach and that its capillary vessels, and particularly its absorbents, act with unparallelled energy. We know also, that different portions of the stomach derive their vitality from different portions of the nervous system. Is it not possible, therefore, to conceive that one part of the stomach, having lost its vitality, may be acted upon by another which retains it? It is by no means incumbent upon me to make out even the probability of this supposition, the bare possibility of it is obviously sufficient for my purpose."

How Smith accounts for the disappearance of food from hollow balls introduced into the stomach—the widely quoted experiments of Spallanzani—will be referred to presently.

Here is the essence of the theory of digestion which he proposes:

"My proposition is, that the first step of digestion is effected by capillary veins, originating in the villi of the stomach with absorbing extremities, and terminating in the great branches of the vena portae. The arguments in favor of it are drawn from the results of certain experiments, from the nature of the change effected on the aliment, from the analogy of plants with animals and from the anatomy and pathology of the digestive organs."

We are thus better prepared to understand another of his objections to the chemical functions of the stomach. He argues:

"If this opinion be correct, digestion is the only instance in the animal economy in which an important change is wrought upon a large volume of matter in any of the large reservoirs. All the changes, which are effected upon the aliment after its mingling with the blood, are wrought in the capillary vessels of the lungs and the nutrient vessels of each tissue to which it is appropriated. In fine, all the changes which are wrought upon the blood, either for more perfect animalization, secretion, exhalation, or any other purpose are wrought in the capillary tissues, where the circulating fluids, becoming exceedingly attenuated, are subjected to the peculiar action of the vessels which convey them. No changes are wrought upon the blood in the heart or in any of the great blood vessels.

"Glandular structures appear to be little else than congeries of minute vessels, for the purpose of increasing the surface with which the contained fluids are in contact and thus subjecting them more fully to their peculiar action.

"Is it not surprising, therefore, that so great a change can be effected upon a large mass in the stomach, when, to accomplish changes much less important, it is necessary that the matter acted upon should be made to pass through vessels indefinitely multiplied? It will presently be seen that, by the hypothesis which I offer, this difficulty is not incurred, since, by that, the more important part of digestion itself is effected in the capillary vessels."

The subsequent fate of the gastric chyme has even until very recent years been the subject of uncertainty. By earlier writers it was assumed to be converted into the chyle of the lacteals in some vague way and there to be endowed with distinct "animal properties." Smith recognized the weakness in the current statements and adapted it to meet his newly promulgated views. Some physiologists maintained that by the action of the bile, etc. in the duodenum the chyle was prepared for the lacteals.

"I will hazard the assertion," writes Smith, "that there was never a particle of what was ascertained to be chyle, obtained from any other source than that of the lacteals or thoracic duct. The existence of chyle in the intestines has been presumed from the belief that the lacteals have no power to effect a change on their contents, and that consequently they were taken up precisely as they are found in them. If this be the case, the conclusion is palpably false, for who can say that the lacteals have no peculiar actions by which their contents are wrought upon? . . . I think it may be with safety asserted, that no animal properties can be demonstrated in any substance which has not been subjected to the action of capillary vessels."

Sufficient details of this unique explanation may be considered here in order to elucidate the author's conception of the digestion process.

"On the supposition that the villi of the stomach act upon the aliment as suggested above, electing from it such principles as are subservient to nutrition, the appearances of the chyme are precisely what we should expect. The sensible properties of chyme suggested to some of the older anatomists the idea that the aliment, was, in the stomach, attacked by a myriad of small worms which reduced it to the uniform pulpy mass of this substance.[a]

"That this may be effected by a myriad of absorbing mouths, the changes which take place in the aliment render not improbable. An extremely minute mechanical division would of course be effected upon it, and perhaps many substances would be decomposed, some of their proximate principles being taken up. A change in the sensible and chemical properties equivalent to what we actually discover would of course take place. We should also expect that the chyme be variable in its appearance as the food employed varies.

"The manner in which different portions of aliment are successively changed is also much more satisfactorily explained by our hypothesis, for that only can be acted upon which is in contact with the surface of the stomach. This, as stated by W. Philip, by the peculiar action of the muscular coat of the stomach, is made to give place to another layer and the digested portion is conveyed to the pyloric extremity. The appropriate motions of the stomach are constantly evolving the central parts of the mass and bringing them in contact with the surface."

Attention was drawn to the analogous action of the "radicles" of the stomach and those of plants in the soil. Each draw nourishment into an organism.

"By the prevailing theory of digestion, however, an action, by no means analogous to that of the radicles of plants, is attributed to the villi of the stomach, for these last are supposed merely to exhale a fluid which acts chemically upon the contents of the organ. Thus too, the digestion of an animal must be less under the control of vital or organic properties than that of the humblest plant; for in the latter, nothing appears to be left to the agency of physical properties, but all to be accomplished by the vital or organic powers."

Smith attempts to anticipate criticisms of the views which he presents:

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[a] "Perhaps they were as near the truth as those who consider the process to be performed by a chemical agent, for neither the existence of these wonderful worms, nor of the not less wonderful fluid can be proved, and if we reason from the effect alone, we should with more propriety ascribe it to the former."

"It might, perhaps, be thought that if the veins of the stomach, in addition to their transmitting the blood which they receive from the arteries, do also absorb and convey so great a volume of aliment, they should be found in greater numbers, in proportion to the arteries, than in other organs.

"In reply, it is only necessary to call to mind that the arteries of the stomach during digestion are exhaling as great a volume of fluid as is absorbed by the veins. Here we may notice, too, in the supposition, an interesting correspondence of action which supports the doctrine of venous absorption.

"That the arteries of many organs copiously exhale, no one doubts. That the veins absorb is not so demonstrable; but when we take into consideration the relation between the arteries and veins, that the arteries convey the blood *from* the center of the system, and that the veins *return* it, absorption is certainly the function which, in the veins, corresponds to exhalation of the arteries."

From one who warns against the "perplexing sophistries" of his colleagues, the following feeble attempt at a real explanation of a physiological phenomenon will appear surprising to say the least.

"How it is that these phenomena are accomplished, we cannot say. Perhaps they may be taken up in a state of extreme comminution, and perhaps they may be resolved, by the powers of life, into their ultimate, or in some instances, their proximate principles.

"That our food, solid and fluid, should be taken up by the veins of the stomach with sufficient rapidity to be subservient to digestion, is certainly not absurd. Vascular and nervous as the stomach is, we are to presume that its vital energies, in this respect, are far superior to those of any other tissues in the system. The surface, too, which it presents to the food, when we consider its folds and papillae, must be very great.

"The villi of the intestines are known to perform absorption with great energy, and that of a substance which does not appear to be altogether fluid. The villi of the stomach are certainly more numerous than those of the intestines and, a priori, we might fairly presume, from their anatomical structure, that they performed the same function with greater energy."

Smith's Essay on Digestion was written in an early period of the author's career. He lived to win distinction in a different field—that of applied surgery. The document just reviewed has little interest in a purely biographical way; this product of the author's younger years is presented merely to throw a sidelight on the history of physiological studies in America prior to Beaumont's remarkable contributions.

IN DEFENCE OF SAMPLERS.

MRS. JENNIE L. K. HANER,
University of Idaho.

It is not my intention to create a discussion, through the columns of this magazine upon the question of "samplers or no samplers" for Domestic Art courses, but rather to submit, by way of comparison with the experience of others, my opinion, which is the outcome of careful consideration and twelve years of practical application in Domestic Art classes.

I am in sympathy with the idea that something practical and useful would be a wiser outcome of the time spent, if it only could be so. I would favor a plan by which a new pupil in music would be put right on to parts of a finished composition so that when he had all these once gone through with, he would have something with which to regale his friends instead of finger and primary exercises, if this plan were feasible. Instead of the first little scrap and sample exercises in the cooking class, how much better if the things cooked could be in sufficiently large quantities to make them practical and useful in a club or boarding-house where others as well as the cooks themselves could test their values! But this cannot be.

It is quite true that one loves to do the things one knows how to do, thus the first pre-requisite is to learn how to do them. An article or garment, like the rendering of a musical composition, or the preparing of a dinner for guests, is first an ideal in the mind of the girl, and to have that ideal crushed by failing in her endeavor to execute it before she had learned perhaps the first rudiments of this valuable "know how" is hazardous and too apt to deaden the interest and enthusiasm which are the secrets of her later success. To see, as quickly as possible, the finished piece according to the ideal or pattern, is the aim uppermost in her American mind, and to be hindered by the "know how" with its perhaps repeated heartbreaking attempts is almost more than she can bear. She would truly rather throw her piece of work into the fire than submit it for criticism, and with it too often the main feature of her effort, the desired mark for her grade.

Far more generally I have found the following to be the truth. A girl who has had no systematic instruction hardly hopes to see a

practical piece grow out from her inexperienced manipulations with needle and thread, and thimble and scissors. But if she has but the simple "learning how" in her mind she will apply herself to little useless scrap with all the determination, persistence and perseverance, painstaking accuracy, and patience which it is in her nature to summon, and generally, all these go to make up an interest which results in encouragement, pride, knowledge, conscious power, and a good degree of satisfaction besides the portfolio of items for future reference in case she should forget. Then too, the estimate put upon this little encyclopedia with all these evidences of true educational drill and development in judgment, neatness, orderly arrangement, carefulness, exactness, ability to see and execute, showing forth from her finished product, will warrant the mark which will help greatly to build up a higher and stronger ideal, and a greater determination through this conscious power which, later applied to advanced work, results in practical value of some degree of true worth.

In Home Economics, as in all subjects in a school and college curriculum we must aim first at its importance as a school subject, its educational value; its power to unroll or unfold from within the nature of the girl the inherent powers which she may bring with her, then, with these developed, trust her to put them to their utilitarian applications to the betterment of herself, her home, her community and her nation.

FOOD HABITS AND CUSTOMS OF CENTRAL AFRICAN NATIVES.

H. L. KNIGHT.

Since early times the Mountains of the Moon in the heart of Equatorial Africa have been one of the great mysteries of Geography. Ptolmey's description of the mountain range was after a time regarded as a fable and it is only within recent years that geographers have become convinced of the actual existence of snowcapped mountains in this region. Stanley saw the white topped peaks in the distance but was never able to explore the region much as he wished to do so. A number of travelers have penetrated portions of the range but the mystery was not solved until the remarkable exploration of the region by the Duke of the Abruzzi.

He has given the name "Ruwenzori," a native word meaning mountains of the moon, to this mountain chain. The recently published volume, [a]descriptive of the expedition, is a delightful account of exploration and adventure in one of the strangest regions of the world. The expedition landed at Mombasa, and after a journey by rail some 600 miles across British East Africa, a region which only a few years ago was an almost impassible wilderness, took steamer at Kisumu, or Port Florence, on Lake Victoria for Entebbe. Roughly speaking, the steamer route follows the Equator about 200 miles, keeping to the south of the islands in the upper end of the lake, much of the time being out of sight of land.

"The sleeping sickness has turned into vast graveyards the greater number of the beautiful and fertile islands of the archipelago. After depopulating whole districts of the Congo, it appeared in Uganda between 1900 and 1902 and has spread further and further, following the main routes of communication, invading step by step the territories of the Baganda, Basoga and Kavirondo, and making gigantic inroads even to the point of 40,000 victims in one year. The sleeping sickness is especially fatal to men in the prime of life, and hence whole villages and islands may be found tenanted by women and children who alone have survived."

[a]Ruwenzori. An Account of the Expedition of H. R. H. The Duke of the Abruzzi, by Filippi de Filippi, London, 1909.

At Entebbe began the journey through tropical forests to the Mountains of the Moon. As a result of the expedition the extent of the range, the direction of the valleys, the streams flowing from them, the height of the principal peaks, and other important features are known, and a great deal of valuable information has been accumulated regarding plants and animals of the region and other important topics.

The range lies just north of the Equator, between Lakes Albert Edward and Albert, which are fed from its melting snows and are important sources of the Nile. The plant life of this mountain range is very varied, ranging from the tropical vegetation of the low slopes and valleys to the few Alpine plants found just below the line of perpetual snow. Many of the trees and plants are unfamiliar.

"The whole valley on every side as far as you could see was one mass of luxuriant vegetation of indescribable strangeness. The ground was carpeted with a deep layer of lycopodium and springy moss, and thickly dotted with big clumps of the papery flowers, pink, yellow, and silver white of the helichrysum or everlasting, above which rose the tall columnar stalks of the lobelia, like funeral torches, beside huge branching groups of the monster senecio."

Without doubt each person reads with special pleasure in such a book as this the passages which contribute to the subject in which he himself is most interested, and those who are studying nutrition problems will find many statements regarding the camp equipment, the ways in which the food problems of the expedition were solved, and much information regarding agriculture, food supply, and customs of the native tribes with whom the expedition came in contact.

While the stores of the expedition were being carried on board the steamer at Port Florence there was time for a visit to the native market of Kisumu. "Here the natives assemble in great numbers from the neighboring villages, mere groups of huts surrounded by a hedge. . . The crowds of men and women come across the level country, carrying on their heads baskets woven with great art out of grasses. . .

"The market is held in the open air or under sheds erected on purpose. It consists mainly of small traffic in dried fish, sweet potatoes, grain and bananas. The buyers stand in groups around

the sellers, who crouch or sit on the ground beside the baskets of every conceivable shape which contain their wares. Men and women smoke the short straight pipes of the country. Others circulate hither and thither with that buoyant and elastic tread, like the gait of a wild animal, which comes from the habit of moving without the impediment of clothes."

The camp outfit was carried by native porters from Entebbe to the mountain range where the work of exploration began. "The whole camp outfit, including tents, beds, sleeping bags, stools, tables, baths, cooking utensils, the hermetically sealed cases containing clothing; the photographic materials, and the materials for the zoological, botanical and mineralogical collections; the arms and ammunition, formed 114 loads weighing about 47 lbs. each, all numbered and so marked as to be immediately recognizable.

"The commissariat formed 80 additional loads of the same weight, each one of which contained rations for 12 persons during one day. The supplies had been laid in on a calculation of a sojourn of 40 days above the snow-limit, and of a period of the same length below, to allow for the journey from Entebbe to the mountains and back. The rations were in tin boxes, soldered, and enclosed in thin wooden boards. The only difference between the high-mountain rations and those for the lower regions was that the latter were without tinned meat, because it would be easy to find fresh meat supplies throughout the inhabitated regions.

"According to calculation 194 porters were needed to carry the entire equipment. In addition to these there were the caravan leaders, the personal servants, or 'boys,' with their own porters, the natives who were needed to take care of the horses and mules, and who were to drive the oxen, goats and sheep which were provided for the sustenance of the caravan, and other natives, with sundry minor attributions. The total mounted up to above 300 persons."

In the journey through the tropical forests the route follows a native path or road. "The contrast with the open tracts enhances the charm of the forests. After crossing a slope scorched by the sun, the traveller enters into the profound shade heavy with the perfumes of acacia, mimosa, jasmine, and honeysuckle.

"The district is fairly populous, but the inhabitants are so hidden away among their banana groves and impenetrable grasses

that it is possible to pass quite close to villages without noticing them. They consist of clusters of huts usually situated half-way up a hill, surrounded by tufts of bananas, little cultivated fields and a few forest trees. The huts are of the usual conical type. The circular roof thatched with grass straw is artfully constructed to reach down to the ground on every side except over the entrance, where it is cut short and projects into a low narrow porch. The interior is encumbered by the numerous pillars and posts which support this heavy roof. Some of the huts are surrounded by an enclosure, or even by several enclosures, so that three or four courts must be crossed to reach the house.

"The land around the huts is cultivated for a short distance only. As is usual in tropical countries, the indolence of the population limits the production of the soil to the amount which is strictly necessary to sustain life. There is no trace of co-operation. Each family owns its hut and its field, which it cultivates for its own exclusive use. Agricultural labor is performed entirely by women. They cultivate plantain, egg-fruit, potatoes, sweet potatoes, beans, maize, dura, cotton, sesame and sugar-cane. A delicious fruit, always cool and refreshing, is the pawpaw.

"The banana, or plantain, is the staple of diet. There are several varieties. Besides the sweet banana, which is eaten ripe and raw, there is a plantain which is gathered unripe and eaten cooked. From the flesh of another variety a sort of bread is made. The juice is pressed out and forms a refreshing, cool drink called Mbisi. This becomes alcoholic and intoxicating if allowed to ferment, and is then called Mwenge. Finally the leaves and stalks are used for various purposes. The origin of the cultivated banana is uncertain. Botanically it is quite different from the wild native banana, and it is doubtful whether it could have been derived from it."

On this journey the camp sites were selected in advance.

"The encampments were always situated at a certain distance from the villages, in places selected beforehand and prepared for the purpose. There was usually a hut where meals were provided for the Europeans, and one or two sheds to shelter the equipment from the weather. Around the sheds stood the European tents. . . The tents were surrounded by a zeriba or enclosure of plaited cane which served less as a defence than as a

means of dividing the European camp from that of the native porters.

"The native porters would arrive at their destination at a run, singing and shouting, throw down their loads hastily on the spot fixed for the purpose, and immediately set to work to build huts for their own shelter. The huts would spring up all around with the most marvellous rapidity. The method of construction is most ingenious. A number of slight rods or flexible canes are stuck into the earth in a circle. Their upper ends are bent so as to meet in the middle and interwoven so as to form a dome. Upon this are placed bundles of grass disposed in such a manner as to leave a narrow opening for the entrance. Thus in less than a quarter of an hour a vast grassy plain is transformed into a considerable village. While the work proceeds, there arrive from the neighboring villages long files of women and old men carrying on their heads parcels of fruit and sweet potatoes wrapped in plantain leaves. Swarms of naked children accompany them. The tiny ones are carried on their mothers' backs in a fold of their garment. In this way the caravan lives entirely on food supplied by the population of the regions crossed." . . .

"The most remarkable and changeful spectacle was presented by the swarming native camp, with its deafening racket and perpetual excitement, dominated by the incessant rolling of drums and the inharmonious strains of uncouth musical instruments, the loud cackling of poultry, the bleating of flocks and lowing of cattle." . . .

"As evening closes in, the camp is lit up by hundreds of fires, around which the porters sit until far on in the night, roasting the sweet potatoes, or boiling the plantains which, with the addition occasionally of a little dried fish, form their sole diet.

"After a march of five or six hours over heavy ground, carrying substantial loads on their heads, this frugal meal was amply sufficient to their simple needs. Banana wine is a rare luxury, while water is scarce and filthy, with a disgusting smell and taste even when boiled."

At almost every camp some native chief would pay a visit to the Duke, "surrounded by retainers bearing the umbrella and stool, the insignia of power, and followed by a train of ministers and a bodyguard armed with [illegible]es and staves.

"The rear was usually brought up by a crowd of natives driving goats and sheep, or even calves and bulls, and bearing baskets full of fowls, eggs and bananas, to be presented as gifts to the strangers." . . .

"The Duke, or some member of the expedition chosen to represent him, would next return the chieftain's visit and present a gift, usually quite moderate in proportion to the value received. The dwellings of the chiefs are circular huts, with walls of plaited reeds and the usual native roof. The interior is divided by curtains into various rooms. The walls are adorned with illustrations from European periodicals. The floors are covered with mats and skins. There is usually a fair supply of chairs and cushions. The whole is clean and orderly. The hut is surrounded by several zeribas. In the courts between the zeribas are huts for women, slaves, soldiers, etc."

In this part of the journey more or less game was obtainable.

"Now and again a shooting party would set forth. Guinea-fowls and doves abound in the plantations around the camps. The region is rich in elephants, zebras, antelopes, lions and leopards. This sort of game, however, requires special beating, and is not compatible with the rapid marches of a caravan bent upon a totally different aim. It was only very seldom and at a great distance that an occasional antelope was seen fleeing from the approach of the party."

When the mountain climbing and other severe work of the expedition began it was necessary to replace the Baganda porters with natives who were better able to endure the hardships.

"The Baganda are a people of the plains, and evidently incapable of enduring the fatigue of mountain marches. It had now become obviously necessary to replace them by Bakonjo, who are acclimatized to this valley and accustomed to climb its slopes in the chase after marmots and hyraz."

The Bakonjos are "tall men of robust habit, with somewhat prominent jaw. Their hair is either shaven or disposed in strange fashion, and they frequently wear a small beard. Their skin is tanned by the sun, the rain, and the cold, and is hard and rough as leather. They wear a piece of cloth hanging from their loins, bracelets of metal or cord around their arms and legs, and a fur pouch suspended from the neck for pipe and tobacco. Some wear a leopard skin over their shoulders, or a cloak made of

rabbit pelts (hyrax) stitched together. . . They carry long staves on their march and use them with great skill in the difficult places."

"The moment a halt was called during a march, in less than no time the natives would have kindled a fire and be enjoying a fine blaze and smoking their pipes, and it was not always easy to induce them to start again promptly. They were once found on the road, shivering in the rain and stark naked, having taken off their vests and blankets so as to enjoy to the full the heat of the glowing coals. They ate eagerly whatever food was supplied to them, but they did not like the novelty. They made wry faces before making up their minds to swallow tea, and far preferred their mess of dura flour, which to us seems nauseating, to the white wheat flour, even when prepared with butter.

"In spite of these trying conditions of life, the Bakonjo showed admirable patience and docility. It was very rare, indeed, for even a single porter to refuse to go on with his load, although they nearly always got their feet swollen and hurt by the stones."

One of the principal camps was made of necessity in a valley where the ground was covered with boulders and dense vegetation and the almost constant rain and cold added to the general discomfort.

"Poor Igini, the cook, had the hardest life of all. He was the only one whose activity was confined within the ring of deep mud which turned the camp into a close prison. Squatting between four boulders, hedged about by the cases of rations, the kitchen implements, the fire, and the tent, he had far less chance of exercise than during the polar winter which he had spent in Teplitz Bay, [during the Duke's expedition to Mt. St. Elias, in Alaska], where he was forced to go half a mile to fetch the meat of some bear hung up by the ship, or had to work to disinter the cases of rations, or help to run after the dogs."

After the work of the expedition was accomplished the return journey was made over practically the same route as that followed to the Mountains of the Moon. No one can read the admirable account of this expedition, written at the Duke's request by Filippo de Filippi, without realizing that the Duke of the Abruzzi has not only planned and successfully carried out a remarkable journey of exploration but has made a very substantial and important contribution to geography and to many other fields of knowledge.

THE DAILY MEALS OF SCHOOL CHILDREN.[a]

A Digest by Miss E. W. Cross.

In this bulletin the author emphasizes the necessity for the adequate nourishment of school children and suggests plans for accomplishing this which may be used as a basis for discussion.

"It is costly to educate a child," she points out, "and the cost may become waste if educational advantages are offered to those who are dull because of improper feeding, or who are underfed and ill-nourished." The energy for bodily growth, for play and for clearness of the brain to study is produced from food and the problem is not only to ascertain the right amount but also to preserve "the relative proportion of the various so-called food principles."

School authorities have experimented with serving lunch in the school to the many underfed children, administering not only to the bodily needs, but developing the cultural side as well. The child is only a part of a larger problem since for every underfed school child there is probably one at least too young to be in school and many suffering adults. "The question of feeding school children in general may, however, properly be regarded as an educational one, if it can be shown that the ordinary education of the schools can be made of greater value to the pupils if food is served by the school authorities, or if it can be shown that there are certain facts about food and certain habits of eating which should be given as part of public education, and which can be given to young children best by the laboratory method, i. e., by actually serving food in the school."

The educators in public schools are not able, as a rule, to carry out ideals because of lack of funds and we find our best models in the practice schools connected with well-endowed colleges and in many private schools. Reports are given from schools "which are striving to be models." The Speyer School, New York City, supplies every child from the kindergarten to the third grade with a cup of milk and a graham cracker at half past ten. The child pays for the food if he is able, but if unable he is fed with the others. In the Hebrew Technical School for Girls in New York City every girl is given a cup of milk or cocoa in the

[a]By Caroline L. Hunt, U. S. Bur. of Education Bulletin, 1909, No. 3.

middle of the morning. At noon soup is sold by the school for one cent a bowl. It is reported from both schools that there is a marked improvement in physical condition and orderly ways. Perfect sanitary conditions and careful attention to physical training have aided in this development.

Those in charge of backward children have always adopted the plan of feeding the children in the school. Miss Farrell, now in charge of the ungraded schools of New York city, reports an interesting experiment made by her when she was a teacher. "Of the class of twelve boys who sat down to the first school lunch only one had sat at table with his family. If the habit of sitting down to a table decently and in order is as valuable as we are inclined to consider it, it would seem as if every child ought to have a chance to taste of its advantages and to decide for himself whether it is a custom he wishes to continue in later life or not."

Sufficient money must be put into the experiment of the school lunch to make it educational, otherwise "the entire work would seem to fall more properly to charitable organizations or poor relief boards." "It was the recognition of the dangers lurking in the food sold to school children and also the realization of the vast educational opportunities that were being thrown away, that led Mrs. Ellen H. Richards in 1894 to bring her very valuable work of serving simple luncheons to the students of the high schools of Boston."

In establishing school lunches the school authorities cooperate with organizations for improving social conditions, as in the Lake View High School of Chicago, the associated club being the Ravenswood Woman's Club. The school lunch seems specially adapted to the rural schools. Mrs. Richards[a] has made many valuable suggestions for such an undertaking.

The dishes prepared by pupils in Domestic Science are utilized for lunch in the Trade School for Girls, Boston; the Normal School, Honolulu; Hebrew Technical School for Girls, New York City; and the High School of Practical Arts, Boston. Serving the lunch in the school affords an opportunity to make it a means of education in house-furnishing and gives an opportunity to impress lessons of hygiene. It is desirable to have the con-

[a] Good Luncheons for Rural Schools without a Kitchen, by Ellen H. Richards, Boston, Whitcomb & Barrows, 1908.

struction of the room, its decoration, and its furnishing of such a character that they may serve as models. The lunch room at Lewis Institute, Chicago which occupies a light, airy room on the fifth floor, has served as a model for many high-school lunch rooms. By example it has probably influenced the location of other school lunch rooms, "for the practice of putting lunch rooms into unattractive basements, so common elsewhere, has never gained a foothold in that city." While they have the check system those who serve food do not handle money. The democratic policy prevails,—teachers, students and employees eating in the same room and generally waiting on themselves.

In the Ethical Culture School, New York City a hot lunch is served every day. The students are divided into two groups, all of each group sitting down at one time. The Friends' School, Washington, D. C., arranges for students to pay for lunches by the year, or they are allowed to buy single lunches or certain articles of food. Rochester, (N. Y.) high schools cooperate closely with the board of health. Milk from tuberculin-tested cows only is sold and other foods are most carefully watched.

The most common method of serving in high schools is from a counter. The trays should be on the counter near the door and sandwiches next on the counter. It is convenient to have glasses, silver and napkins placed at some distance from the end of the counter.

The bills of fare in high schools where ideals prevail do not differ greatly in content or price. In the Lake View High School, Chicago, the equipment is paid for by the board of education, and running expenses are met by the sales of food. They are able to sell the following for five cents each: Soup, meat pie, vegetables, salads (except potato), light desserts (including ice cream), tea and coffee. In the Ethical Culture School, New York City, the lunches are ordered a week ahead of the time of serving, therefore there is but little risk of having food left over. The service is better and the prices are correspondingly higher. In the Horace Mann School where 600 pupils are served daily, the cost of equipment (including chairs, tables, counter and the table furnishings) was about $2,500.

"Those who have charge of the selection of food for children at home or in the school should have some knowledge of the proper proportions of the different kinds of food needed to maintain a

child of school age in proper physical and mental condition." It is explained that dietaries are usually expressed in terms of protein, fats, carbohydrates, mineral matter and fuel value. The fuel value is given in terms of the calorie, and the gram is taken as a unit of weight. The statement of Dr. C. F. Langworthy[a] that the average adult in the United States is daily supplied with about 100 gms. of protein, 150 gms. of fats, and 350 gms. of carbohydrates, with a total fuel value of 3,240 calories is quoted together with his estimate that children of from 2 to 5 years of age eat about four-tenths of this amount, those between 6 and 9 eat five-tenths of it, and those between 10 and 12 years of age take from six-tenths to nine-tenths. On this basis, a child from 6 to 9 years of age would require 50 gms. protein, 75 gms. of fat, and 175 gms. of carbohydrates. This would represent a day's menu such as the following:

Breakfast: Orange of medium size, cooked oatmeal, ⅓ cup; milk and cream mixed, ½ cup; toast, 1 slice; butter, ½ cubic inch; milk to drink, 1 glass.

Dinner: Whitefish, 3 oz. as purchased or 1½ oz. edible portion; potato, 1 small; celery cooked in milk, ⅜ cup; bread, 1 slice; butter for bread and potato, 1 cubic inch; rice pudding, ½ cup.

Supper: Egg; toast, 1 slice; butter, ½ cubic inch; milk 1 glass; prunes 3, cooked with ½ level tablespoon of sugar; cookies.

The weight and composition of the various articles of food in this bill of fare are given in the table on the following page:

Mrs. Richards[b] gives a list of foods which might constitute the daily diet of a child from 6 to 9 years. These foods supply 56 gms. of protein, 47 of fat, and 207 of carbohydrates. If the fuel is taken from the starch and sugar and less from fat we would have the same figures. Fats for the child's diet should be secured "from milk and eggs and from the butter and cream used at the table." If "made dishes" are used not only is too much fat introduced into the diet but it is in a most indigestible form.

An unlimited amount of properly cooked cereal and bread is allowed "except when it takes sugar to make them acceptable

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a Food and Diet in the United States by C. F. Langworthy. Reprint from the Yearbook of U. S. Dept. of Agriculture, 1907, pp. 361-78.

b First Lessons in Food and Diet, by Ellen H. Richards. Boston, Whitcomb & Barrows, 1904.

Weight and composition of the foods given in the foregoing bill of fare.

Articles of food.	Weight.	Components.				Fuel value.
		Protein.	Fats.	Carbohydrates.	Mineral matter.	
	Ounces.	Grams.	Grams.	Grams.	Grams.	Calories.
Milk	18½	17	20	25	3·7	376
Cream	1¼	1	7	1	.2	71
Fish	3	9	2	.....	.6	61
Bread	3½	9	Trace	52	1.1	266
Eggs	2	7	5	.....	·5	79
Rice Pudding	4	5	5	24	·9	165
Rolled oats	½	2	1	10	·3	58
Cookies	½	1	2	11	.1	68
Potatoes	2	1	Trace	11	.6	48
Prunes	1¼	1	.....	21	·7	90
Celery	2	Trace	Trace	2	·5	11
Sugar	¼	.....	.....	7	.....	29
Oranges	4	Trace	Trace	10	·4	43
Butter	1¼	Trace	30	.....	.1	282
Total	44	53	72	174	9·7	1,647

. . . Limit sugar to small amounts in desserts or in the form of candy. Fruits, preferably cooked, and vegetables should form a part of the daily diet."

The child up to the age of nine gets the protein "he needs from 4 glasses of milk, one egg, and the bread and cereal he takes. There seems little reason to add meat to his dietary."

A comparison is made between cost of food and wages and the deduction "may indicate why so large a percentage in our schools appear undernourished."

What is stated to be probably the most thorough and valuable investigation of under-feeding that has been made in this country is that which was carried on in Chicago during the summer and early autumn of 1908 by W. L. Bodine, Superintendent of Compulsory Education, and Dr. D. P. MacMillan of the Department of Child Study and Pedagogic Investigation. "It was estimated that in addition to the 5,000 really necessitous children, there were at least 10,000 so poorly nourished as to be unable to do their school work well." In Chicago the use of any part of the school funds for the purpose of feeding indigent children, however, has been declared illegal. A similar situation in England was met in December, 1906, by an Act of Parliament permitting local school authorities to use funds for this purpose.

"It seems to be universally conceded that Paris has the best system of feeding the school children that has been worked out by any municipality." Since canteens are attached to the public schools situated in all districts "they may be said to be retained as an educational policy rather than as a relief measure." This makes them of "more interest to educators than the examples . . . of schools where food is furnished chiefly to the needy." Certain cities of Germany, Austria, Denmark, Holland, Norway and Sweden, Spain, Switzerland and Italy furnish free meals to school children. The expense is either met by charitable organizations or the municipality and, in some instances, by both.

From this examination of conditions and suggested remedies it seems obvious that there are two problems before us, alike in many respects but differing in others. One of these, the problem of the underfed child, is a problem chiefly of poverty; the other, that of the feeding of school children, is a problem chiefly of education.

MALNUTRITION IN SCHOOL CHILDREN IN NEW YORK CITY.[a]

In a paper read at the Sixtieth Annual Session of the American Medical Association at Atlantic City, June 1909, Dr. E. Mather Sill of New York City reports the results of an extended study of malnutrition and its treatment carried on in the congested lower East Side of New York. The work was undertaken with a view to ascertaining as far as possible the etiological factors, which to a large extent are the cause of undernutrition of city children, especially of the school age which he considers to be very prevalent.

"The subjects were all taken from the laboring and tenement-house classes and the parents were mostly foreigners. Each little patient, after having a careful physical examination, was weighed, a full history obtained from the mother through a trained nurse who spoke her language, and anything such as tuberculosis, syphilis or other diseases that would have a bearing on the condition of the child carefully noted. Then the following questions were asked the mother: 'What does the child get for breakfast, for dinner, for supper? How many rooms have you? How many in the family, including boarders? Do you keep your windows open at night to allow the circulation of fresh air,and air the house in the day-time? When does the child go to bed? Does the child eat between meals—candy, etc.? How often does the child get a tub bath? Is the child in a grade with children of its own age at school'?"

The answers to these questions were tabulated and the examination in Dr. Sill's clinic of the 210 malnutrition cases showed that 83 per cent of these children depended practically on bread with tea or coffee for their diet. Only 10 reported an egg for breakfast. A fairly large proportion (116) reported meat-soup and potatoes for dinner, and 136 reported meat-soup for supper, but as previously stated, bread was the principal food of the majority when all three meals are considered.

Spargo, as Dr. Sill points out, records that of 12,800 schools children in New York, 2,950, or more than 23 per cent, attended the public school breakfastless or provided with miserably poor

[a]Journal American Medical Association, 52, (1909), June 19, pp. 1981–1985.

breakfasts. Dr. H. M. Lechstrecker, according to Dr. Sill, examined 10,707 children in industrial schools of New York. "Of these, 998 had coffee or coffee and bread only for breakfast; 439 or 4.10 per cent no breakfast; 998 or 9.32 per cent were anemic, owing to lack of nourishment. Only 1,955 or 17.32 per cent, started the day with an adequate meal."

These figures, it is evident, indicate the same condition of affairs which was found in Dr. Sill's studies.

In the 210 families examined in Dr. Sill's investigation the average number of rooms per family was three, and the average size of the family six, which is estimated to provide an average allowance of 600 cubic feet of air space per person.

"Sixty-two per cent kept their windows closed. Fifty per cent of the children ate between meals—candy, etc.; 12 per cent were in a grade at school with younger children. Of these children, 21 per cent went to bed at 8 o'clock, 40 per cent went to bed at 9, 24 per cent went to bed at 10, and 12 per cent went to bed at 11. These children were all under ten years of age and should have been in bed at 7 o'clock."

Bathing was infrequent, for the baths ranged from once a year with four per cent to a weekly bath with only 18.5 per cent.

"We found that all these malnutrition patients were decidedly under weight for their age compared with the weight of normal children, the discrepancy varying from 4 to 16 pounds. Many children were found to be of the same weight as normal children who were from one to three years younger and in extreme cases there was even a difference of four years, and the cases were not picked but all malnutrition cases just as they came.

"The ages of these children were from three to ten years but the great majority (175) were from six to ten years (or the school age). One thousand other children in the primary schools, in the Jewish quarter on the East Side were examined by me. Of these 40 per cent were found to be poorly nourished, under weight and more or less anemic. These were, therefore, malnutrition cases. These children were from six to twelve years of age. Eighty-six per cent had dental caries, 90 per cent had adenoids, 40 per cent had hypertrophied tonsils, 6.5 per cent had defective hearing, 10 per cent had defective vision, 4.5 per cent had tuberculous lymph nodes of the neck, 1 per cent had pulmonary disease, 0.4 per cent had cardiac disease, 0.8 per cent had chorea. . . ."

Seventy-five per cent of the 210 patients examined showed enlarged cervical glands. While only 100 of the chldren were tested for tuberculosis a positive reaction was found with 55 per cent.

"Practically all these children had defects and complications other than the malnutrition, the variety and percentage of which was very much the same as those found in the children examined in the schools. . .

"It was observed that many of these children were in such a condition that they had no desire for good nourishing food and, indeed, could not retain it, because their stomachs had become so accustomed to the tea and bread or coffee and bread diet. The mother would say when told what food the child required, 'But, doctor, she will not take it.' Von Noorden accounts for this condition by stating that the activity of the digestive organs during starvation is lowered and the secretion of saliva, gastric juice, bile, and intestinal secretions diminish. In many of these cases the stomach had to be gradually educated to a stronger diet and the children were treated just as one would treat convalescents from disease."

Many who have studied such problems were not able to test the value of improved diet and other hygienic measures in the treatment of malnutrition cases as was Dr. Sill, and his report is therefore of special interest.

"In the treatment of this condition the first duty should be to instruct the mothers in the schools and clinics, either by word of mouth or printed directions, as to what foods are best for the growing child, which are the most nutritious and healthful for the money, the best way to cook different foods, what articles of diet to avoid, and the necessity of plenty of fresh air and sunlight, and cleanliness. Warm clothing is a necessity.

"These children should be given a highly nutritious diet, that is, foods that contain a large amount of proteid material."

Such proteid foods were selected as beef, eggs, chicken, fish, ham, bacon, dried beef, milk, flour, oatmeal, dried beans and peas. With respect to the food which he found most valuable in these cases Dr. Sill states that he placed the children on a diet "consisting of milk (a quart a day), cocoa, eggs, red meat (once a day), fowl, fish, bread and butter, and cereals, such as oatmeal (of which 94 per cent of the nitrogenous matter is proteid), farina,

hominy, corn-meal, rice, pure olive-oil, and cream should also be given if possible, with vegetables, such as spinach, stewed tomatoes, stewed corn, cauliflower, baked and creamed potatoes, purees of beans or peas, and baked beans, and fresh fruit, such as oranges, pears, apples, raw and baked, and in the form of apple sauce, and stewed prunes. The children were ordered to stop school, be out in the open air as much as possible, open the windows at night and air the room thoroughly by day, go to bed at 7 or 8 o'clock and take a rest in bed for an hour or two after the mid-day meal. Bathing was encouraged for the purpose of cleanliness, and a salt-water bath followed by a vigorous rub for its stimulating and invigorating effect."

"It is surprising how rapidly these children improved and gained weight with no other medication than a simple iron tonic. Some gained as much as a pound and a half a week.

"A mixed diet, both in animals and in man, is usually taken better and the nutrients are more completely digested and assimilated than when only one food is used. Variety in foods of the same nutritive value stimulates the appetite and prevents the patient from tiring of any special food."

"Vegetables should be given in abundance since the vegetable proteid carries with it a large amount of potassium salts, which are the predominating salts in muscles, neutralize acid products and forestall rheumatism. Wheat flour and wheat bread have a high nutritive value."

The figures cited by Dr. Sill and by other investigators leave little doubt that undernutrition of school children is widespread, and that it is a serious condition whose causes should be sought and for which remedies should be provided.

"Poverty," Dr. Sill concludes, "is an important factor in the causation of this chronic starvation or ill-nourished condition, but ignorance on the part of parents plays even a more important part—ignorance as to food-values, ignorance as to cooking, ignorance as to how to live, ignorance as to cleanliness, fresh air and sunlight. Although very few mothers had a proper idea of what foods were nourishing, or how to cook foods properly to make them nourishing, all were willing and glad to be instructed, and it seems to me that just here lies in a measure the partial solution of this problem. Since the mother who loves her child is by far the best instrument the state can employ to see that that

child is properly nourished, fed and cared for, and in providing for its real education, the mothers are better than teachers, school managers, medical inspectors or attendance officers. It is economy to educate and improve the mothers and in that way guide the natural love to be an effective help in bringing up children to be healthy and useful citizens.

"Visitation of the homes of underfed children and instruction of mothers would wonderfully reduce the number of these underfed children. The employment of the mother is responsible for many neglected children; given a father out of work or sick, and the mother must take in sewing or go out to work, with too often the result of underfeeding of not only the children, but herself as well. . .

"Is it fair to suppose that a hungry child, wasted and weakened with the attendant conditions of lassitude, irritability, nervousness and anemia, the result of prolonged underfeeding and bad housing, can study in school for five hours with scarcely any intermission?

"Although great advancement in the science of education has been made in the past twenty-five years, the physical condition and development of the child has been grossly neglected. When the child has a poorly developed and weakened body, little can be expected from it in the way of mental development or advancement. The duty of the nation is, first of all, to care for the proper feeding and housing of its children and so to insure their proper growth, development and health. . .

"No doubt the so-called stupidity or backwardness of many children in the public schools is simply the result of neglect and underfeeding. . .

"Von Noorden, from experiments on man and animals has deduced the following law: 'The expenditure of energy during starvation diminishes in the same proportions as the weight of the body, apart from extreme degrees of emaciation or adiposity and with moderate bodily exercise by day and normal hours of sleep by night.' The operation of this law of Von Noorden, then, would account for the lassitude, nervousness and loss of energy seen in these children. . .

"The growing child, requiring a highly nutritious diet, requires also a great deal of fresh air to oxygenate the food properly. This requisite is impossible, as we shall presently see, with the

housing conditions as they are. The conditions of overcrowding in New York, (and in fact in all our great American cities) has become a most menacing one. . .

"When actual figures show that six people on an average are crowded together in three small rooms, two of which are often inside rooms, the sum total of the air space in these rooms averaging about 3,600 cubic feet, (which is only half the air space that six people should have) is it any wonder that so many are in such pitiful condition of health and the contagious diseases and tuberculosis are so prevalent in this quarter?"

As regards remedies Dr. Sill believes that the present condition of affairs in the congested districts of large cities in this country could be entirely changed and controlled by suitable laws.

"This can never be accomplished by private charity but must be dealt with and provided for by the state and national legislature; since laws governing these things are necessary for the public safety, health, and welfare."

"A child is a valuable national asset and its welfare and healthy development is of great importance to the state, which should be legally under obligation to look after it. Children who are starved, through negligence, ignorance, or poverty on the part of the parents should be fed as every child has a right to be fed; there ought to be no such thing as a starving child in our land, especially in the public schools, where children are under the daily observations of their teachers. It should be the public duty to see that such children are provided with nourishing food.

"In England, Scotland and France, nourishing meals are given many of the schools at a slight cost, and are paid for by tickets previously purchased by the parents. Many meals are given free. This has been done in a few schools in this country with success. No distinction is made between those who pay for these meals and those who are unable to do so.

"Let us remember that the future as well as the present is our concern in considering this great problem. Shall we civilized people allow our poor to be fed and housed worse than our domestic animals? If these horrible conditions are allowed to continue and rob the masses of their vitality, what can we expect the next generation to be? There can be but one answer, one outcome. Look to London's Stepney for the answer."

ANOTHER VIEW OF THE SUNSHINE LAUNDRY.

HESTER RIDLON.
Simmons College, Boston.

"Trifles make perfection"—is a saying nowhere better shown than in the work of cleaning—especially that process called "laundering." It is by the high ideals upheld and the scientific standard of the work, that the Sunshine Laundry has held the attention of the laity and of the world of Home Economics.

We are always prone to feel either that women are not taking their full share in the world's work or that they are rash in undertaking a "so-new" field. Yet statistics show an increase of nearly threefold in the last fifteen to twenty years in the number of different occupations in which women are engaged. And here we must realize that the Sunshine Laundry stands as a pioneer. Started ten years ago by the Misses Mary A. and Grace G. White, it has prospered under their guidance and proprietorship, and shows today on its books forty per cent of the names written there in the first week of its business.

The Sunshine Laundry is situated just outside of Boston, Mass., in Brookline Village on the edge of the Parkway. It is a two-story frame building with a great many windows and skylights, painted a creamy yellow, and seems to radiate sunshine and cleanliness. As one enters, on the immediate left are the offices, glassed off from the rest of the floor. An atmosphere of quiet activity, orderliness, and immaculate cleanliness is evident everywhere. On the second floor this is even more marked, for the many women workers are an unusually cheerful and pleasant group, as they naturally would be in a place so well lighted and ventilated.

In following the stages through which articles pass in the process of laundering we will begin in the far northwest corner of the second floor; the whole floor being partitioned into three general rooms or divisions. All incoming goods are received from a lift, and are "marked in." Except in the case of the shirts, collars and cuffs, all these articles are marked, not on the piece itself, but on a bit of tape, which is then sewed to the article. Next, an expert woman examines each piece and decides whether it needs mending, the removal of stains or

other special care,—and thus directs its further course in the wash room. A competent seamstress is constantly employed by the laundry to mend those pieces that will be definitely saved by a few stitches—such as large rents, buttons, etc.,—or those things which the customer asks to have mended and pays for.

As a rule each load brought in by a driver makes a "lot," and each lot is kept separate from other lots in a general way throughout the whole laundering process. The lot, being marked, goes to the wash room. Here all colored things that need special care, and all fine and elaborate articles are washed by hand. The other plainer things are done in the steam washers. It is, therefore, possible to wash successfully a large percentage of the things by steam and probably with less wear than if they were done by hand. Other reasons why machines are used in washing are because a better color can be obtained, and because hand washing increases the cost to the consumer. Next the clothes must be wrung, and this is done in machines of a centrifugal nature, run by steam. Inasmuch as wet tissue paper was not torn when tried in one of these running at high speed, little need be said about the safety and advisability of steam wringers for the clothes,—and by this means that degree of dampness is retained which is best for the perfect ironing of that article.

Some things are then sent directly to be ironed, while the rest pass on to the third critical process,—the starching. Special care is taken to have the specific article starched as it should be, or, in some cases, as the customer has definitely requested. Special care is taken of the collars, which are hung over a bar, and not by the buttonholes, and in drying them and all starched things quickly, as an aid in securing fine results.

From this room we pass into the third, or ironing room, which takes up about two-thirds of the floor, with east, north, and south exposures. Here one remarks the unusual fact that everything is ironed by hand, except the collars and cuffs. Polishing, or small irons are used on the starched or detailed work, like embroideries, and large irons on the rest of the garment. Collars are dampened between moist cloths, then they and the shirts are pressed for a definite length of time in hydraulic presses, to ensure an even dampness. The collars are ironed by passing flat between heated rollers heavily padded, the crease dampened, and the collar turned and finished by hand. Handkerchiefs have

special care. No marks are put on them. In order to keep those of each person or family together, they are enclosed in cotton bags and then thoroughly washed by steam. In ironing, the handkerchiefs, those in each bag are also kept together, and when finished they are marked by labeled strips of paper encircling each pile. When finished, all these things pass by elevator or by hand to the main floor, where they are sorted and packed for shipment.

Unusual results are obtained by the laundry in the production of the flat work. The care in dampening and pressing, and the ironing with the large irons gives a beautiful luster, making the table linen, especially, look like new.

There seems to be no sense of stress or press. The work goes on and on in a cheery, sunny, bright, capable manner, and one may well comment on the freshness of the air in all parts of the building. It is probable that no laundry of its size anywhere approaches it in doing so much of its work by hand,—machinery being used only when necessary. The Misses White began with the ideal of hand work and have adhered to that principle unswervingly. This undoubtedly accounts for their success, as shown by the fact that the first week the laundry was in existence it had seven workers and received forty-two bundles; while at this writing, in April, 1909, there are 125 workers (the present usual force) and 1800 bundles, meaning in this case that over 30,000 pieces are taken care of within the week.

The proprietors are both graduates of Smith College and it is easy to see how much such women,—workers with brains and culture, which means appreciation of high standards and ideals, —are needed in this field alone.

No wonder the customers of the Sunshine Laundry are found in all the New England states, the Middle West, and far South, as well as in its own neighborhood. The prices charged for laundering compare most favorably with those on any lists from laundries the country over which claim to do work of like excellence. The proprietors, with unlimited courtesy, are glad to show their plant to anyone, and their superintendents execute their desires in this regard in a most happy manner.

MISS MARIA PARLOA.

Miss Maria Parloa, widely known as a teacher and writer on the art of cookery, Home Economics, Domestic Science and kindred subjects, died August 21, 1909 at her home in Bethel, Conn., where she had lived for about five years, following a long residence in New York City. Funeral services were held at her home at Bethel, Conn., August 24, and at the Chapel at Forest Hills Cemetery, Boston, August 25. Reverend Thomas C. Campbell, rector of St. John's Church, Jamaica Plain, officiated at the latter service, and many of the old friends who had known Miss Parloa intimately during her long residence in Boston were present. The body was cremated and the ashes deposited in a lot at Forest Hills.

Miss Parloa had been in poor health for some months and on the Wednesday before her death underwent an operation from which she failed to rally. Until quite recently she had expected to be able to go with a party of friends to Europe, for a year or two of travel.

With the exception of the books on cookery Miss Parloa bequeathed her library to the borough of Bethel, Conn., with funds in trust, the income to be used for library maintenance. The borough of Bethel was also bequeathed a sum for the establishment of an athletic field for the use of the young people of the place, while a generous bequest was also made to the Maine Central Institute of Pittsfield, Me. Her books on cookery Miss Parloa bequeathed to the Boston Public Library.

Miss Parloa, who was of English descent, was born in September, 1843, in Massachusetts. Her parents died in her youth, and in her early girlhood she went to Maine and entered the Central Institute at Pittsfield, from which she was graduated with credit. After her graduation she went to Florida and taught school in Mandarin several seasons. There she was also interested in Sunday school work and, to help the Sunday school to secure a much-needed organ, she gave at New London, Connecticut, the next summer she came North, her first lecture on the art of cookery. This proved so successful in showing results to be achieved in any home by knowledge rightly applied that she continued her study of the subject and made it her life work.

She had always been interested in household matters and had improved every opportunity to perfect herself in such things, and from statements made in her published works it is evident that she early acquired a thorough knowledge of methods of cookery and of other household matters. Her first professional work as a lecturer began in Boston in the summer of 1877, when her practical demonstrations attracted widespread attention and created genuine interest to an extent which caused Miss Parloa to open in the autumn a school of cookery in Tremont Street, at the corner of Mason Street, where private classes learned under her instruction by careful observation and actual practice how to cook in healthful, economical and yet tempting ways.

Miss Parloa was for several years a special instructor at Lasell Seminary at Auburndale, gave courses in sick-room cookery to Harvard medical students, lectured before classes at the Boston Cooking School and gave many courses in various places in New England as well as at the Chautauqua Assembly. Sbe went abroad in the late seventies and made researches as to English and French methods of cooking. After her return and following lecture tours in Western cities, she removed, in 1882, to New York City, where, in East Seventeenth Street, near Stuyvesant Square, she opened a model school of cooking, conducted upon the same plan as her Boston school. This school she conducted for several years, relinquishing it upon going abroad for a long stay.

After her return from this visit to Europe Miss Parloa devoted her time, as she had in part previously, to writing. She contributed to various leading magazines, to the nutrition bulletins of the U. S. Department of Agriculture, and wrote a number of books, including Camp Cookery, First Principles of Household Management and Cookery, New Cook Book and Marketing Guide, The Kitchen Companion, The Young Housekeeper, Household Economics, etc. Her first book, The Appledore Cook Book, was published in 1872.

All of her books have had a widespread circulation, and are notable not only for the information they provide and the good judgment shown in the collection and arrangement of material but also for the clear, simple, and direct style which characterizes all her writings and never leaves the reader in doubt. For many years Miss Parloa has been connected with *The Ladies'*

Home Journal as one of its editors, conducting a department devoted to the subject which she had made her life study.

Miss Parloa was an original member of the Lake Placid Conference of Home Economics, organized in September, 1899, and a valued contributor to its programs and committee work. She was also an original member of the American Association of Home Economics and was present at the organization meeting in Washington, D. C., January, 1909.

Miss Parloa was one of the first in the United States to see clearly that household duties were something more than tasks, that they had an important relation to life in general, and could be approached by the same methods as other subjects worthy of study. Writing in 1877, she says "The preparation of food should be made more a matter of conscience with the housekeeper and cook than it is at present. In planning the preparation of a dish, the question should not be, Is it convenient, and will it please? but Will it be healthful, mentally, morally, and physically? for the food we eats affects all three natures.

"Then food, to do its highest and best work, must be of the best quality, prepared carefully (but always to retain its simplest form), partaken of regularly in a cheerful room and in cheerful company."

That conditions have greatly changed since this was written and that housekeepers are now very generally studying their problems seriously is in no small degree due to Miss Parloa and her work.

The Home Economics movement has grown to great proportions since Miss Parloa first began her lectures and to its development she has been a very important contributor. She was a cheerful observer, a woman of unusual experience in her work, a helpful teacher, and had the faculty in an unusual degree of inspiring in others a love for her chosen subject.

A writer in *The Boston Transcript* of August 25, 1909, says: "It would have touched deeply Miss Parloa's friends in Boston if they could have seen yesterday afternoon the tribute of love paid to her at her home in Bethel, Conn. Although she had been a resident there for less than seven years, in that brief period she had won a firm and lasting hold on the affections of the whole community, and the expression of grief was as sincere as it was general. It was not confined to the older people;

the young folks knew they had lost a rare friend and were eager to show in some way their sense of that loss. Each person present appeared to regard Miss Parloa as a little nearer, a little dearer, than she had been to anyone else. From all sides there came words of appreciation and praise for what she had done to improve Bethel, for it is chiefly through her efforts to arouse a feeling of civic pride that the old town has taken on a new and vastly better appearance, so that even the school children regard her as their benefactor. What is still to be done for them in her name they do not yet know; but she has remembered them in a characteristic manner.

"It was a simple service that was conducted at her pleasant home. It drew together so many mourners that the house and spacious porches were filled. Masses of flowers hid the coffin, but there was no floral tribute more beautiful than that of the club to which she belonged, each member of which brought a single rose to lay reverently near the friend whose death had robbed them of one of their greatest sources of inspiration, enthusiasm and strength."

Tributes to the Life and Work of Miss Parloa.

With a view to indicate more fully the importance and value of Miss Parloa's work as a pioneer in the field of Home Economics, it has been deemed of interest to supplement the foregoing brief account by the following letters of appreciation from some of her late associates:

To the general public Miss Parloa was the one who knew not only how to prepare toothsome viands but who was able to give clearly stated directions to others. As a lecturer and author she was widely recognized.

It is only the members of that inner circle of the workers for better sanitary living in all directions who have felt the inspiration of her broader sympathies and her clear insight into the needs of the community.

Although not a scientificially trained woman herself (there were no opportunities for that in the fifties and sixties) no one saw more need in that direction and no one had more faith in what science might do for the housewife and for the community.

It was for Miss Parloa's class and at her request that I and my associates of the Woman's Laboratory worked up the chemistry of cooking and cleaning first as lessons in her class room with kitchen utensils.

It was her suggestion which led to our work for its introduction into the public school. She probably was an inspiration to others for it was a cardinal principal of belief with her that the public school was the place to spread good ideas.

Miss Parloa was a student all her life and never let slip an opportunity of learning the newest and best. At the first summer School of Food and Nutrition at Middletown, Conn., the younger teachers were often put to shame by her eagerness.

Miss Parloa was a charter member of the Lake Placid Conference and her counsels did much to shape the work of that company and when a larger group met at Washington in December, 1908, to form the American Home Economics Association it was most gratifying to have Miss Parloa with us as a charter member. In the picture taken at the McKinley School on that day (see No. 1 of the JOURNAL, frontispiece) she will be found as the center of the group. Her work was to the last an inspiration to others. The Association is proud to have had her approval.

ELLEN H. RICHARDS

My acquaintance with Miss Parloa was less intimate than with some of the other pioneers in home economics, but because of that my impressions of her may be even more distinct.

Before ever I saw her she sent a long and cordial letter to the girl, uncertain as to choice of a life work, who appealed to her wider experience. One thing she said the first time I saw her (while a student at the Boston Cooking School and she happened to call there) has influenced me many times,—that there was nothing with which a teacher of Domestic Science was not expected to be familiar since all arts and sciences touched the problems of food and shelter. Again, she said something which often occurs to me,—that many persons are so careless of detail, even in the scraping of dishes that they get but half an egg where a whole one is called for, not only losing material but changing proportions of recipes.

She never ceased to study all phases of her chosen work, and certainly she was a vivid illustration of Ruskin's definition of a

good cook. "To be a good cook" he says, "means the knowledge of all fruits, herbs, balms, and spices, and of all that is healing and sweet in fields and groves, savory in meats; it means carefulness, inventiveness, watchfulness, willingness, and readiness of appliance; it means the economy of great grandmothers, and the science of modern chemists; it means much tasting and no wasting; it means English thoroughness, French art, and Arabian hospitality."

Miss Parloa was all this and more,—she was a teacher of unusual success, a writer with a large public, and an investigator at a time when most persons were content to know how to do things, and were not concerned with the why of household problems. Best of all, she was a valued friend to all who came to know her well.

The record of her life should inspire all the young students of the household arts with the need of "carefulness, inventiveness, watchfulness, willingness" as well as "the science of modern chemists."

ANNA BARROWS.

The passing of Miss Maria Parloa marks an epoch in one of the most important activities which count for better living and higher standards in man's development.

Just thirty years ago she was a pioneer teacher in the first incorporated cooking school in the United States, organized in Boston (1879) under the auspices of the Women's Educational Association, the same liberal minded workers who made possible the Harvard examinations for women. Large hearted, broad minded, full of warm sympathy for all that is best worth living for, her influence can hardly be overestimated.

As a member of the first Lake Placid Conference on Home Economics and an almost constant attendant, her sound judgment and broad grasp of problems there discussed carried great weight. Her personality was very winning and her influence stood for all that was best in our American home life. Recognizing as she did years ago that the nation which will lead the world will be a nation of homes, her work stands as representative of the truest form of patriotism, that which builds for character and counts for love of country and of home. It is such work as hers which helps to make permanent and prosperous homes, the strength of any country.

ANNIE DEWEY.

My acquaintance with Miss Parloa began with the summer school for Home Economics held at Middletown, Conn., in 1902. Her enthusiasm, genial spirit and devotion to the work attracted me greatly.

The reply she made to Professor Atwater at one of the lectures when he asked her to explain a certain point:—"I do not think I can make it clear, Professor Atwater because I do not understand it very well myself,"—seems to me to indicate one great secret of her success. In her books and lectures she did not attempt to tell what she did not know from actual experience. One of the pleasantest memories I have of her is of the night I spent at her Bethel home.

She was so enthusiastic over her garden and her home. She said she felt she must work with the vegetables before she wrote the Government Farmers' Bulletin on the cooking of vegetables. There were so many little points about which she wished to satisfy herself. She was so modest about her own attainments that we found it difficult to secure the data we wished for publication.

We shall greatly miss from the workers one who brought to us so much of good cheer, inspiration and accurate knowledge.

ISABEL BEVIER.

For a number of years it has been my good fortune to know Miss Parloa and count her a friend. She wrote two Farmers' Bulletins for the Office of Experiment Stations,—Canned Fruits, Preserves and Jellies; Household Methods of Preparation, and Preparation of Vegetables for the Table, which have had a very large circulation, and are still in great demand. Very frequently in connection with the Office of Experiment Stations' nutrition work questions arose in which Miss Parloa's advice was needed, and from the fund of her knowledge and experience she freely gave. This cooperation with the Office of Experiment Stations gave us an unusual opportunity to become familiar with Miss Parloa's accurate knowledge, careful attention to details of work, and her scientific attitude of mind. She was never satisfied to make a statement unless it could be substantiated by her own knowledge, or the results of some one's experiment or research. Her observations on the effects of methods of cookery upon the wholesomeness of food

were extended, and in this and in other ways she contributed much which is of value to the science of food and nutrition.

C. F. LANGWORTHY.

Maria Parloa, who died a few weeks ago, was in many ways a most remarkable woman. She has left to the world a rich legacy in her works on household economics. She was a pioneer in the work and her books are the foundation upon which most of the good books on cookery that we have today are based. She was second to none in her line of work and her interest never flagged. She kept abreast of the times in everything pertaining to her subject. Her thorough understanding of the art of seasoning made her cooking stand at the head in this country. She was generous to a fault, always ready to help the struggling friend to a better position, and we shall never know how much she has done for those who needed the help she could give. Those of us who knew and loved her will sadly miss her sweet spirit from our midst.

MARIA DANIELL.

EDITORIALS.

Meeting of National Education Association.

The meeting of the National Education Association held in Denver, Col., July 5–9, a brief summary of which appears on page 390, was one of deep interest to all concerned with the newer phases of education.

Compared with any former program this one shows an extraordinary number of papers that deal with the application of education to actual living conditions. We find here an ample response to the popular appeal so long disregarded that the schools shall train boys and girls primarily for good citizenship, to be healthy, moral and useful members of society.

"How May the Schools be More Closely Related to the Life and Needs of the People" was the subject of one paper, but variously worded this was the subject of many others.

The meeting of this association at Denver showed how welcome to those engaged in pioneer work is an opportunity of comparing experiences and of learning the trend of thought in each other's localities.

The formation of local clubs is urged on the workers as an excellent means of gaining courage as well as of disseminating information.

Suggestions as to the Journal.

Much space is given in the present number of the JOURNAL, to reports of the Denver meeting of the Home Economics Association and still other papers and reports will appear in subsequent numbers. The membership of the Association as printed in the first or February number of the JOURNAL was 746. It is now about 850.

It is time to scrutinize this list in order to determine to what classes of people the Association appeals and to discover whether the JOURNAL is meeting their needs.

First. By far the larger proportion, at least four fifths, of the membership, is composed of those who are directly interested in the teaching of Home Economics and Manual Training. They were largely instrumental in forming the Association and to them the JOURNAL furnishes in each issue valuable articles bearing on their work. A strong point has been the study of nutri-

tion, a subject that appeals strongly to the teacher. The two departments, News from Institutions and News from the Field, bring information from others engaged in the work.

Second. Of next importance on our list of subscribers are those whose interests center in what is now denominated Social Service. Such persons seek information on whatever conduces to the well-being of the inmates of institutions, and on "extension work," which aims to instruct young and old in the ways of right living, whether in settlements or farmers' institutes or through city lecture courses or by means of the printed page. Matrons of institutions, dietitians, settlement workers, students of vital statistics, hygienists, librarians have already found in our pages valuable information, and will continue to do so. In the current number may be noted Dr. Sill's study on malnutrition in school children, while in former numbers will be found articles on institution dietaries and management, on clean food and on other allied subjects.

Third. The housekeeper and club woman makes up the third class of those belonging to the Association. Most of these would also be classed among those who watch with keen interest the outside conditions that affect other homes than their own and they would find much in the articles that are especially directed to the worker in Social Service. But the JOURNAL aims also to meet more directly her need of help as a worker and an administrator within her own four walls. The relation of work as done in the house to the development of outside industries is a pressing subject for discussion, the saving of labor, the ethical questions that underlie the expenditure of the family income, the relation of home to school, art in its relation to dress and house decoration, are all questions of vital interest, which will receive full attention in the pages of the JOURNAL.

We hope to increase the number of intelligent housewives on our list of subscribers. Such an increase in our membership would call for a larger proportion of articles that appeal especially to them.

The editors cordially invite subscribers and readers to send articles that are in line with the purpose of the JOURNAL, also items of interest regarding institutions and courses of study.

They also welcome criticisms and suggestions. Only by such co-operation can the JOURNAL be made a success, for as yet articles cannot be paid for.

Keep your files of the JOURNAL. It aims to bring into its pages a report of what is vital in the great movement that is to put at the service of the home the results of modern progress and enquiry. History is made along these lines and its original records will be valuable for reference. Keep your files.

The JOURNAL is the property of the Association, its organ for information and exchange of opinion; it has no advertising agent busy with ingenious schemes for bringing it to the attention of an increasing number of people. Its circulation can grow only through the efforts of members. The editors hold a limited number of copies for free distribution and they will be sent on application as samples to those who are likely to become subscribers.

AMERICAN HOME ECONOMICS ASSOCIATION SECOND ANNUAL MEETING.

Attention is again directed to the second annual meeting of the Association, to be held at Boston, Friday, December 31, 1909 and Saturday, January 1, 1910. The Hotel Westminister, Trinity Place, has been selected as the headquarters for December 31, and it is expected that either a luncheon or dinner will be held there upon that date.

The meetings have been arranged to take place at the time of the winter meeting of the American Association for the Advancement of Science, which annually draws together a large assemblage of the scientific workers of this country. Associate membership in this association, costing $3.00, enables the holder to secure the special railway rates provided, and participation in the many events planned for the meetings. No separate railway rates can be secured for the Home Economics Association.

The sessions of the Home Economics Association will include a business session, at which will occur the annual election of officers and the discussion of future policies. Letters in regard to these may be sent to the Secretary by those who cannot be present. The fullest expression of opinion is desired. At other sessions papers will be presented and there will be short addresses by some of the prominent men and women who will be in attendance at Boston during the week, as well as a social session for better acquaintance. As at the annual meeting last winter arrangements are being made for round table conferences.

A New England Branch of the Association was organized at a meeting held at Simmons College, October 9. The officers chosen, viz.: Miss S. L. Arnold of Simmons College, chairman, Herbert S. Weaver, vice-chairman, and Miss Isabel F. Hyams, secretary-treasurer, with Prof. W. D. Hurd, Miss Alice Wilcox, Miss Bertha M. Terrill, and Robert L. O'Brien, additional members of the executive committee, will constitute a committee of arrangements for the Association meeting.

The December issue of the JOURNAL will contain additional details of the meeting. Requests for information may also be sent to Miss H. I. Goodrich, 264 Boylston St.; Miss Hester Ridlon, Simmons College; or the President of the Association, Mrs. E. H. Richards, Massachusetts Institute of Technology.

NEWS FROM THE FIELD.

Denver Meeting of National Education Association.

The forty-seventh convention was held July 3 to 9. The attention accorded to industrial education was remarkable. As noted editorially in *Experiment Station Record:* "Nearly one-half of all the papers, addresses, and reports presented at the convention dealt in some direct way with one or more phases of industrial education. So decidedly did this subject dominate all others in the papers and discussions of the general sessions and the different department meetings that it shows clearly the almost universal demand for the reorganization of public school curricula along lines giving greater emphasis to local industrial and domestic affairs—agriculture, manual arts, and Home Economics. It might also be said that the desirability of introducing such work as rapidly as possible into the regular work of the public schools was taken for granted, and that the problems troubling those who attended the Denver convention related to methods, administration and the training of teachers."

A large share of this interest in industrial training was accorded to those phases dealing more closely with Home Economics. The importance of Domestic Science teaching found decided recognition in the presidential address by L. D. Harvey, and in the address before the general convention by President J. W. Robertson of Macdonald College, entitled Education for the Improvement of Rural Conditions.

Mrs. E. H. Richards read a paper before the department of elementary education on The Application of the Household Arts and Sciences to the Work of the Elementary School, and in the department of Manual Training discussed the influence of Domestic Science on rural and city home life. At the latter meeting the influence of Domestic Arts on rural and city home life was discussed by Miss Helen Schurz of Kansas.

A movement which has been under way for a number of years for the reorganization of the departments of the National Education Association culminated at Denver in the adoption of the report of a special committee on reorganization, which reduced the number of departments from twenty-one to ten. In doing this three departments (physical education, Indian education, and the library) were eliminated entirely. The national council and the departments of higher education, music education, and special education remain as before, while the department of women's organizations becomes the department of school patrons.

The remaining thirteen departments will be combined as follows: The department of superintendence and that of school administration into a new department of superintendence; the department of child study and that of normal schools into a department of professional prepartion of teachers; the departments of elementary education and kindergarten education into a department of elementary education; the departments of secondary education, business education, and science instruction into a department of secondary education; and the departments of manual train-

ing, rural and agricultural education, and technical instruction into a department of industrial education. This last department is also to include Domestic Science instruction.

The leading officers of the general association elected for the ensuing year were: President, J. Y. Joyner of North Carolina; treasurer, Arthur Chamberlain of California; member of board of Trustees, J. M. Greenwood of Missouri; member of executive committee, J. H. Phillips of Alabama. I. H. Shepard holds the position of secretary for life.

In connection with the Denver meeting of the National Education Association and American Home Economics Association the Western Society of Technical Chemists and Metallurgists gave a reception and banquet, at the Brown Palace Hotel, on July 2, to their wives and others, Dr. and Mrs. Robert H. Richards being the guests of honor. Mrs. Richards spoke on science as applied to housekeeping and advised the men to establish a household appliance testing station, where the mechanical problems may be worked out and then to pledge their wives to give the machines a fair trial.

The National Conference of Charities and Conventions.

The thirty-sixth conference of this association was held at Buffalo, June 9–16, and was well attended. The usual interesting and helpful program was presented.

From the standpoint of Home Economics the more immediate interest centered around the sections of Families and Neighborhoods, Health and Sanitation, and the Children's Section. In the first of these the opening paper was the Integrity of the Family, by Joseph Lee of Boston, who protested against any scheme of social betterment which would tend toward the disintegration of the family. School feeding seems radical, but in reality is not radical enough. The home must be so far rehabilitated that the child can be properly cared for within its shelter, and the community, instead of taking away the functions of the family, must rather educate the home-makers to the point of the efficient fulfillment of their function.

Miss Mary Richmond of Philadelphia enumerated five important points of contact between social work and public school education as follows: Irregular attendance of school children; premature employment; improper feeding and underfeeding; unwise start in first going to work; and construction and development of special ability, to which particular attention should be given.

Dean L. H. Bailey of Cornell University, with the topic Rural Communities, found the greatest disability of country neighborhoods to be their lack of social economic organization. Improvement was to be expected however, through an awakened consciousness of the country itself rather than through city-directed philanthropics. Ameliorating conditions should be the increase of population, the extension of the means of communication, the inevitable cooperation and organization of farmers for business purposes, and the extension of education and recreation. The church, the school, the library and the press must be made more effective. A similar point of view was taken by John C. Campbell, who described conditions

among the white people of the Southern mountains. He advocated better and more centralized and specialized schools, wherein the boys could be taught concerning the mountain resources and their exploitation, and the girls could receive instruction in cooking, nursing, and other home arts. He considered that Southern spirit and experience could be more fully used in solving the problems and suggested that the institutions founded under Northern auspices should be turned over as rapidly as possible to local auspices.

In the Section of Health and Sanitation, Roy Smith Wallace discussed The Responsibilities and Opportunities of a Health Officer. In this he considered the shortcomings of sanitary regulation as chiefly due to the lack of special training of officials for work in public hygiene, and largely remediable by more extended education, especially in the public schools. Dr. Luther H. Gulick spoke on private and municipal administration, and Dr. G. W. Goler gave a stereopticon lecture on Milk for Babes. At a subsequent session institution dietetics was discussed. Dr. C. F. Langworthy of the United States Department of Agriculture presented an account of dietary studies conducted as a part of the Nutrition Investigations of the Office of Experiment Stations in Philadelphia, Baltimore and Washington. Dr. Herbert Mason King described the progress in scientific feeding of tuberculosis patients at Loomis Sanatorium.

Among the speakers in the Children's Section was Miss Martha Berry of Georgia, who discussed Rural Education among Southern Highlanders, with special reference to the work of her school at Rome, Ga. Not only have new thrift and ambition come to characterize the boys of the school, but it has been also very effective as an object lesson to the entire community. George Sehon of Kentucky instanced the extension of effort for education among the mountaineers of Kentucky and the great ambition of the younger generation to get effective schooling.

Officers were elected for the ensuing year, the most important being the following:

President, Jane Addams, Chicago; first vice-president, F. H. Nibecker, Glen Mills, Pa.; second vice-president, Ansley Wilcox, Buffalo, N. Y.; third vice-president, Judge William H. DeLacy, Washington, D. C.; general secretary, Alexander Johnson, Fort Wayne, Ind.; and treasurer, Edward Boyle, Chicago, Ill. Miss Mary E. Richmond of Philadelphia is chairman of the Committee on Families and Neighborhoods; Thomas J. Riley of that on The School and the Community; and Dr. Charles P. Emerson, Clifton Springs, N. Y. of that on Health and Sanitation.

NEWS FROM INSTITUTIONS.

University of California.

A course of 30 lectures was given at the summer school during July by Mrs. Ellen H. Richards. Lectures dealing with The Relation between Costs and Efficiency, alternated with those having for a general subject Euthenics,—Better Living, the Effect of Environment.

Under the former title were discussed the following topics: Economics of living,—ideals of spending; differences between twentieth and nineteenth centuries in conditions; standards—psychic income; cost of shelter—body needs, psychic needs; the increased cost of sanitary science; the capitalist's opportunity; estimates of three grades of income; cost of food in relation to efficiency; cost of clean food in production and transportation and storage; cost of cleanness, municipal cleanness, markets, etc.; the clean house and family habits,—costs; prevention cheaper than reformation; cost in human life of neglect and ignorance; educating the masses by example,—museums, public lectures, traveling exhibits, etc.; and State interest in the efficiency of its citizens.

The course on euthenics embodied the following lectures: Opportunities for the improvement in education, ideals, sanitation, therefore in health; individual effort—each strives for his ideal, learning the reasons and understanding the philosophy; community efforts—best ideals of individuals become ideals of community to be striven for; personal habits and ideals cultivated for future effect on family and community—clean homes; public habits, public buildings, public schools; effect of public sanitation on private habits and conditions, especially on aliens; children of today adults of tomorrow, hence value of training; teaching the children is the chief occupation of the family—reflex influence of this teaching on the family is good; effect on the community—community has duty to family, again reflex; public works—methods of government are educational; agents of education—students of social conditions and scientific research, educational institutions bringing to the mass of the people an awakening; applied science, i. e., Home Economics for girls, sanitary engineering courses; not until those agencies are complete is united effort effective—for instance, water supply, garbage, flies, mosquitoes; community enterprise means more perfect control of environment, hence its spread throughout the country—central heating as well as lighting plants, employment bureaus, laundries, kitchens; it is the duty of the higher education to lead the way,—satisfaction with life is the best defense against disease; great opportunity for the teacher of Home Economics; and the power and the responsibility of the homemaker.

The lectures were very well attended, some one hundred hearers being registered and twenty-five for university credit.

It was proved beyond all question that interest in both private and municipal housekeeping is fully awakened and at last intelligent women and thoughtful men are grasping the fact that science may be applied to the affairs of daily living and that it is in this direction that progress is

to be made in the betterment of social conditions. The marvelous regeneration of San Francisco in so many respects must make the other cities about the bay more active in the civic housekeeping lines.

The State Board of Health had most opportunely fitted up a car to illustrate sanitary defects and remedies and to educate the people by statistics, charts and models in the facts so well known to sanitary experts. An illustration of the exhibit forms the frontispiece of this issue of the JOURNAL.

This car was used as a practical demonstration during one week of the lectures and was most helpful. Other states would do well to imitate this example. Mrs. Richards also suggested in one of her lectures that city boards of health might use some window space along a crowned street for varied exhibits, photographs, etc. of conditions demanding remedy.

The work thus auspiciously opened, is to be systematically continued. Acting upon the suggestion of the Association of Collegiate Alumnæ, the authorities of the university are planning the co-ordination of a number of courses now in the curriculum for the organization of a department of Domestic Science.

Three instructors are interested in the courses, viz. Professor Meyer E. Jaffa, head of the State Pure Food Laboratory, Miss Jessica Peixotto, assistant professor of sociology, and C. G. Hyde, associate professor of sanitary engineering. A formal announcement of the new department was made with the opening of the university. It is not planned to add any courses to those of last term, but to correlate and expand those already established in such a way to to make possible a comprehensive investigation of the conduct of the home.

Professor Peixotto's participance in the department will include the courses which she has previously given in the department of economic. Poverty will be studied, not only in the phases of its relief, but also of its prevention. The problems involved in the care of children by the State, when such care is necessary, will be approached, with deductive conclussions for parental care.

The Household as an Economic Agent is the title of another course, which will have to do with the relation of the home and its management to economic life.

Water supply, sewage disposal and the like in their sanitary aspects will be taught the students in courses by Professor Hyde. Three courses will be offered in sewage disposal; in one, students will receive training in watchfulness over plumbing. Another course will treat of the quality of water from the esthetic, commerical and sanitary points of view, how to get pure water and how to keep it pure, and the necessity for both.

Of special importance will be Professor Hyde's course in "applied sanitary science." In this he will consider the interpretation of vital statistics, the significance of dust, dirt and filth, the problem of ventilation and warming, of baths and laundries, of house and street cleaning, of water, milk and other food supplies, of garbage and refuse collection and allied topics.

Co-ordinate with these will be courses in the source and preparation of foods, given by Professor Jaffa in the department of nutrition. One of his

courses will have to do especially with the composition and purposes and preparation of human food, and with food adulteration and food preservatives. Laboratory courses in food analysis will be given at the agricultural building.

The university has also announced that for the first time credit will be given on entrance requirements of from 1½ to 6 units for Domestic Science. Six units are now allowed for elementary French, German or Spanish. The credit for Domestic Science must be accompanied by credit for chemistry, except that decorating and furnishing will be accepted for a maximum of 1½ units provided the candidate has credit also for free hand drawing.

The State College of Washington. The new Domestic Economy building which has been completed and is now occupied by the department is a commodious three-story brick building. On the first floor are fuel rooms, the cloak rooms, the laundries, a cooking laboratory, and a large lecture room. On the second floor are the office; the reception room, which will also be used as an exhibit room, where part of the student work will be kept; the dining room; a small and large cooking laboratory; a large lecture room; and two class rooms. On the third floor are the sewing rooms, the rest room for the students of the department, the model bed-room, and the bath. The building is well lighted, and is an ideal place for the work for which it was designed. It is believed to be the only college building west of the Rocky Mountains devoted wholly to the work of Domestic Economy.

The course in Domestic Science offered is as follows:

Kitchen Management.—The care of utensils, glass, china, and silver; care of the fire; cooking of cereals, vegetables, milk, eggs, cheese, soups, breads, beverages, etc. Six hours of laboratory work per week.

General Cookery.—Cooking of meats, salads, desserts, cakes, frozen mixtures , and fruits. Care of dining room and table service. Six hours of laboratory work per week.

Advanced Cookery.—The preservation of fruits and vegetables, food rations, dietaries, invalid cookery, and bills of fare. Six hours of laboratory work per week.

Food Economy.—Lectures on foods; marketing; the study of dietaries.

Laundry Work.—Lectures and practical work in washing, starching, ironing, and polishing; caring for fine lace; cleaning and pressing of cloth; removal of ink and other stains. Two hours of laboratory work per week.

Home Nursing.—One lecture per week on care of the sick; first aid, simple household tests and remedies for disease; care of infants.

Domestic Science Teaching in Georgia. The *Southern Educational Review*, for December-January, 1908–09, contains an article by Elizabeth G. Holt, describing a phase of domestic science which is being tested in Augusta, Ga. The school is located in a cottage, typical of the home of the average mill laborer, and is situated directly in front of the large public school from which its pupils come for

their work. "The general plan of the work is for the grades to come in small sections numbering from 6 to 10 to this 'School Home' during the morning hours, for instruction in cookery, housecleaning and all matters of value in good home-making, sewing, handicrafts, and gardening. In the afternoons, following a regular schedule, groups of four or five children 'keep house' in the School Home. Each group comes every two weeks. The house belongs to them for the time being, and theirs is the responsibility to have it clean and in order to cook a luncheon for invited guests, to sew, to garden, in fact, to occupy themselves as good housekeepers. Through this practice they gain a degree of independence and grow in habits of order and cleanliness." The teacher is near enough to be called on for advice if necessary, but she does not interfere with the freedom of the children, her commendation or criticism coming afterwards. The children are now raising a fund with which to build a model cottage by selling various things that they cook and handicraft articles. The cottage and its equipment are to be planned by the children.

The Relation of the Teacher of Domestic Science to the Community

The *Journal of Education* [Boston], of June 3, 1909, contains an article on The Relation of the Teacher of Domestic Science to the Community, by Miss Anna Barrows, of Teachers' College, Columbia University, from which we quote as follows: "The general educational value of Domestic Science is well established with those who have investigated it, and its practical bearing on personal hygiene, temperance, and thrift are unquestioned."

"Other things being equal, the best special teacher will be the one who has had some experience in general teaching and thus knows the capacity of average children and the limitations of the schoolroom."

"The Domestic Science teacher who has been a general teacher and is a practical housekeeper may accomplish much in any public school in correlating the work of other teachers with her own and helping them to make their instruction more helpful to the homes."

"The teacher who boards is likely to adapt her program to the schoolroom rather than to markets or social conditions."

"The school of Domestic Science or the public school kitchen should be as much an experiment station for the housekeepers of the community as is consistent with its regular routine. Through the indirect influence of the teacher, who is looking for opportunities, much has been accomplished already, and more may be in purifying markets and foods, and improving the sanitary condition of public buildings." "There is no way in which a teacher today may better serve the individual, the family, and the community than by inculcating thrift and the dignity of hand labor, and this is what Domestic Science stands for."

BOOKS AND LITERATURE.

What Ought To Be Done To Make the Schools Useful to Our Daughters. Katharine Eggleston. *Woman's Home Companion*, 36, No. 9, (Sept., 1909), p. 20.

"The present courses offered in Domestic Science are under estimated and limited by the attitude of the public and of the pupils themselves. The consistent adaptation of every phase of education to the needs of girls will have a tendency to make the girls see the real dignity and value of whatever makes them efficient in woman's sphere. Time and patience will bring to us a laboratory equipment which will serve for the actual working of Domestic Science. There are promising beginnings already made; and they will grow very fast if we wake up to see that a definitely womanly training is the great need of our time."

Domestic Science in the Schools and Colleges. Helen Sayr Gray. No. Am. Rev. 190, (Aug., 1909), pp. 200–11.

This is a popular article in which the apathetic attitude of many educators and the general public toward the introduction of Domestic Science courses into the colleges and schools is deplored and a vigorous plea made for greater attention to the need for such courses.

Health Studies. Applied Physiology and Hygiene. By Ernest B. Hoag, Lecturer in Hygiene at the University of California and elsewhere, with a prefatory note by David Starr Jordan, President Leland Stanford, Jr., University. Boston, D. C. Heath, 1909.

"To help the young people in our schools who will be men and women before long is the purpose of this book." Men and women who "ought to know better than to do unwholesome things must be taught to do better." The style is clear and concise, suggestive rather than explanatory and for the most part up-to-date. A few old statements have crept in like "sewer gas is poisonous"; "carbon dioxide the poisonous gas exhaled from the lungs." An appendix with review questions and reading references adds to the value.

A Field Kitchen of the German Army. Faller (Umschau, 13, No. 26, pp. 552, 553, fig. 1).
A portable range is described.

England's Field Kitchen. Illust. London News, Am. Ed. 43 (1908), No. 1121, p. 643.
Similar to the above.

Patent Foods and Patent Medicines, R. Hutchison. (Two lectures London, 1906, pp. 47.

This publication, contains data regarding the composition of a number of infant foods, invalid foods, and patent medicines. So often the question arises, where can data be found on patent foods that mention is made of the publication though it has been in print for some time.

The Fuels of the Household. By Marian White, Boston. Whitcomb & Barrows. Cloth, pp. 97.

Since information on this subject has not always been readily available for housekeepers, it has not had the attention that it deserves. Now that we are beginning to consider the conservation of our national resources, such a book is especially timely. Miss White discusses the origin, composition and uses of the various fuels, thereby affording a history of the development in cooking and lighting, with special reference to the economics of the household. It has been designed especially for young housekeepers and those who are to become such.

Practical Testing of Gas and Gas Meters. By C. H. Stone, B.S., M.S., Chief Inspector of Gas, Public Service Commission, Second District, New York. New York, John Wiley & Sons; London, Chapman & Hall, Ltd., 1909; 8vo., pp. x+337, figs. 51. Cloth.

The work consists of four parts dealing respectively with photometry, chemical tests, calorimetry, specific gravity and pressure, and testing of meters. It is stated that so far as the writer knows, no book, written by an American and dealing purely with American methods of gas manufacture and testing,and thoroughly up-to-date, is available today, and the volume has been prepared to meet these requirements.

"The writer's chief aim has been to explain clearly, simply and fully such tests as would be of practical service to the gas manager, chemist or photometrist, and to make such comments and suggestions as might guide him in his choice of apparatus or process and assist him to secure accurate and useful results therewith."

A Crystalline Bleaching Powder. K. J. P. Orton and W. J. Jones. Jour. Chem. Soc. [London] 95 (1909), I, pp. 751–757.

A study of the chemical nature of bleaching powder.

The Textile Fibers.—Their Physical, Microscopical and Chemical Properties. By J. Merritt Matthews, Ph.D., formerly head of Chemical and Dyeing Department, Philadelphia Textile School. New York, John Wiley & Sons; London, Chapman & Hall, Ltd.; 2d ed. rev. and enl. 8vo., pp. viii + 480. Figs. 127. Cloth.

This second edition of what may be considered the standard work on textile fibers in the English language, has been carefully revised, though the arrangement and general plan of the first edition have been retained. Much valuable matter has been added. The scope of the volume may be judged from the following table of contents:

Contents: Classification of the Textile Fibres; Wool and Hair Fibres; The Chemical Nature and Properties of Wool and Hair Fibres; Shoddy and Wool Substitutes; Minor Hair Fibres; Silk: Its Origin and Cultivation; Chemical Nature and Properties of Silk; The Vegetable Fibres; Cotton; The Physical Structure and Properties of Cotton; Chemical Properties of Cotton; Cellulose; Mercerized Cotton; Seed-hairs other than Cotton; Artificial Silks, Lustra-cellulose; Linen; Jute, Ramie, Hemp, and Minor Vegetable Fibres; Qualitative Analysis of the Textile Fibres; Quantitative Analysis of the Textile Fibres; Appendix I, Microscopic Analysis of Fabrics; Appendix II, Machine for Determining Strength of Fibres; Appendix III, Commercial Varieties of American Cotton; Appendix IV. Bibliography of the Textile Fibres.